WASTEWATER STREAM CHARACTERIZATION FOR TA 36 KAPPA SITE

at
Los Alamos National Laboratory

ENVIRONMENTAL STUDY

CHARACTERIZATION REPORT #13

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WASTEWATER STREAM

CHARACTERIZATION FOR

TA-36

KAPPA SITE

ENVIRONMENTAL STUDY

Prepared For:

THE LOS ALAMOS NATIONAL LABORATORY
LOS ALAMOS, NEW MEXICO

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EXECUTIVE SUMMARY

Buildings 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 19, 20, 21, 22, 23, 44, 45, 46, 47, 48, 53, 54, 55, 56, 57, 58, 67, 69, 80, 81, 82, 83, 84, 86, 94, 95, 102, 103, 104, 107, 110, 111, 112, 113, 114, 118, 119, 120, 121, 122, 124, 125, 127, 128, 129, 130, 131, 133, 134 141, 142 and 184 at TA-36 were visited to document all drain piping and to make permitting recommendations. The pipes exiting the buildings are as follows:

1) from 36-1: one unpermitted discharge, one outfall permitted as 06A106, one outfall to the sanitary sewer system and three discharges of storm water,

2) from 36-3, 36-4, 36-5, 36-6, 36-7, 36-8, 36-11, 36-12, 36-13, 36-19, 36-20, 36-21, 36-23, 36-44, 36-45, 36-46, 36-47, 36-53, 36-54, 36-56, 36-57, 36-58, 36-67, 36-69, 36-80, 36-82, 36-94, 36-95, 36-102, 36-103, 36-104, 36-110, 36-111, 36-112, 36-113, 36-114, 36-118, 36-119, 36-120, 36-121, 36-122, 36-124, 36-125, 36-127, 36-128, 36-129, 36-130, 36-131, 36-133, 36-134, 36-184: no drains,

3) from 36-9, 36-10, 36-83 and 36-107: French drains divert storm water around storage magazines,

4) from 36-22: one discharge to a septic tank,

5) from 36-48: one discharge to a seepage pit, two discharges of rain water, one discharge of condensate from a hot water heater, and one air conditioning condensate discharge,

6) from 36-55: one discharge to a septic tank,

7) from 36-81: one discharge to the sanitary sewer system,

8) from 36-84: one discharge to the sanitary sewer system,

9) from 36-86: two discharges of rain water from automatic sumps and,

10) from 36-141 and 36-142: one discharge of storm water from a secondary containment berm.

Revised EPA Forms are included for the permitted 06A106 outfall. The flows shown on the forms are estimated from site observations, from discussions with Users and from data on the Discharge Monitoring Reports (DMR). Analytical data is 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

During June, 1991 Steve Veenis and John Sisneros of Santa Fe Engineering (SFE) toured buildings 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 19, 20, 21, 22, 23, 44, 45, 46, 47, 48, 53, 54, 55, 56, 57, 58, 67, 69, 80, 81, 82, 83, 84, 86, 94, 95, 102, 103, 104, 107, 110, 111, 112, 113, 114, 118, 119, 120, 121, 122, 124, 125, 127, 128, 129, 130, 131, 133, 134 141, 142 and 184 at TA-36.

The purpose of this study is to identify building drain piping, locate outfalls which discharge into the environment 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 operations. The Wastewater Stream Characterization Policy of April 14, 1992 was followed for the preparation of this report. 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 applications for clean water discharges were not prepared since these discharges do not require permitting at this time and

4. Potential problems were identified and recommendations 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 9) 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 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 (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. A site visit was performed to verify 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 and,

3. SFE verified drain piping by dye checking.

4. This report was revised in May, 1993 to incorporate changes allowed by recent connection of sanitary sewer lines to the new SWSC treatment system at TA-46.

2.0 FIELD INVESTIGATION

The pipes exiting the building have 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 piping 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 exiting from the buildings is listed in Appendix 1 in Tables 2 through 8, with an abbreviations list in Table 1. Appendix 2 contains the waste stream 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 information about the dye study of building drains. Flow

schematics of the drains from each building are attached in Appendix 5 as Figures 2 through 9.

3.0 RECOMMENDATIONS FOR BUILDING 36-1

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 the outfall pipes and includes recommendations for changes to the drain piping. The discussion below gives the reasoning for the recommendations.

3.1 Outfall 36-1-OPN-1

This outfall to daylight receives water from three sink drains in the machine shop/storage area and a water fountain which discharges into a tributary of Three Mile Canyon. During the original dye study, flow was observed discharging to daylight as indicated. However, a retest in April of 1993 did not yield any visible discharge. It was noted that a section of pavement in the driveway area adjacent to the building has caved in due to apparent below grade erosion. It is believed that the outfall pipe may have broken in this vicinity stopping flow to the canyon. Use of the sinks and water fountain should be discontinued immediately pending implementation of the recommendations. Repiping the outfall to the sanitary sewer system is highly recommended. No permitting is recommended, however, an EPA form 2D has been prepared.

3.2 Outfall 36-1-OPN-2

This outfall to a tributary of Three Mile Canyon is permitted as 06A106. The sources include two sinks, one floor drain and two equipment drains in the upper level photo labs and two sinks (employee lounge), two floor drains and possibly an exterior area drain (plugged). Because of the recent tie-in of the sanitary sewer line to the new SWSC treatment plant, it is recommended that this outfall be repiped to the sanitary sewer system and the existing 06A106 permit be deleted. The floor drain in the equipment room (1FD1) receives discharges from a backflow preventer, (2) hot water pressure relief valves, boiler blowdown and an air compressor blowdown. The discharge from the air compressor should be containerized to prevent oil and grease from entering the sanitary system. A new Form 2C has been prepared for this outfall pending repiping to sanitary.

3.3 Outfall 36-1-OPN-3

This outfall goes to the sanitary sewer system and receives flow from two lavatories, five toilets, two urinals, two showers, one water fountain, one sink drain and one floor drain. Floor drain 2FD1 located in the photo processing darkroom discharges photo rinse water into the sanitary sewer. Because the sanitary sewer outfall has been

connected to the new SWSC treatment plant collection line, it is recommended that the existing septic tank system be decommissioned and the NMED permit deleted. No EPA forms were prepared.

3.4 Outfalls 36-1-OPN-4, 36-1-OPN-5 and 36-1-OPN-6

These outfalls to daylight are from roof drains. No changes or permitting are recommended. No EPA forms were prepared.

4.0 RECOMMENDATIONS FOR BUILDINGS 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 19, 20, 21, 23, 44, 45, 46, 47, 53, 54, 56, 57, 58, 67, 69, 80, 82, 83, 94, 95, 102, 103, 104, 107, 110, 111, 112, 113, 114, 118, 119, 120, 121, 122, 124, 125, 127, 128, 129, 130, 131, 133, 134 AND 184

Buildings 9, 10, 83 and 107 are storage magazines which have external French drains to divert storm water from seeping underground into the storage areas. The other buildings do not have any drains. No changes or permitting are recommended. No EPA forms were prepared.

5.0 RECOMMENDATIONS FOR BUILDING 22

Table 3 is a list of the drains to the building outfalls and Figure 3 is a schematic of the piping. The only outfall is from sanitary facilities and flows to the new SWSC sewer

system. The original septic tank system should be decommissioned and the NMED permit deleted. No permitting is recommended. No EPA forms were prepared.

6.0 RECOMMENDATIONS FOR BUILDING 48

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 the outfall pipes and includes recommendations for changes to the drain piping. The discussion below gives the reasoning for the recommendations.

6.1 Outfall 36-48-OPN-1

This outfall discharges water from a sink 1SD1 and cup drain 1CD1 into a small seepage pit. Sink drain 1SD1 receives once-through cooling water discharge from a "cooling unit" located in the same room. It is recommended that the once-through cooling system be removed and a closed-loop, recirculating cooling system be installed in keeping with correct Laboratory policy. An EPA form 2D has been prepared for the cooling water discharge to the seepage pit. Removal of the sink and cup drain is recommended. No permitting is recommended. No EPA forms were prepared.

6.2 Outfalls 36-48-OPN-2 and 36-48-OPN-4

These storm water outfalls to daylight are from roof gutter drains. No changes and no permitting are recommended. No EPA forms were prepared.

6.3 Outfall 36-48-OPN-3

This outfall to daylight is a drain line from the "cooling unit". Once-through cooling water from this unit discharges to 36-48-OPN-1 via sink 1SD1. It is recommended that this small, occasional discharge be included in a general Laboratory Notice of Intent (NOI) to discharge. No EPA forms have been prepared.

6.4 Outfall 36-48-OPN-5

This outfall to daylight is from a pressure relief valve on a water heater. This outfall should be included in a Notice of Intent to Discharge (NOI). No changes are recommended. No EPA forms were prepared.

6.5 Outfall 36-48-OPN-6

This outfall to daylight is an air-conditioning (A/C) condensate drain. It is recommended that it be included in a general Laboratory NOI. No EPA forms have been prepared.

7.0 RECOMMENDATIONS FOR BUILDING 55

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 the outfall pipes and includes recommendations for changes to the drain piping. The one outfall from sanitary facilities appears to go to a septic tank which should be added to the vacuum truck drivers route. Access was not allowed and M-Division should verify this with their personnel. No changes or permitting are recommended. No EPA forms were prepared.

8.0 RECOMMENDATIONS FOR BUILDING 81

Table 6 is a list of the drains to the building outfalls and Figure 6 is a schematic of the piping. The table lists the drains that connect to the outfall pipes and includes recommendations for changes to the drain piping. The one outfall from sanitary facilities is to the new SWSC treatment plan collection system. No permitting is recommended. No EPA forms were prepared.

9.0 RECOMMENDATIONS FOR BUILDING 84

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 the outfall pipes and includes recommendations for changes to the drain piping. The one outfall from sanitary facilities is to the sanitary sewer system. No changes are recommended. No permitting is recommended. No EPA forms were prepared.

10.0 RECOMMENDATIONS FOR BUILDING 86

Table 8 is a list of the drains to the building outfalls and Figure 8 is a schematic of the piping. The table lists the drains that connect to the outfall pipes and includes recommendations for changes to the drain piping. There are two identical outfalls which periodically discharge water from sumps that receive rain water from exterior area drains. It is recommended that these occasional discharges be included in a general Laboratory NOI. No EPA forms were prepared.

11.0 RECOMMENDATIONS FOR STRUCTURES 141 AND 142

These structures are oil storage tanks. Figure 9 is a schematic of the tanks. The one outfall is for draining accumulated rain water. The water should be drained according to procedures in the Spill Prevention, Control and Countermeasures Plan (SPCC) and be included in a generalized NOI to discharge, a locking valve is suggested. No permitting is recommended. No EPA forms were prepared.

12.0 CONCLUSION

This document provides the information to characterize buildings 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 19, 20, 21, 22, 23, 44, 45, 46, 47, 48, 53, 54, 55, 56, 57, 58, 67, 69, 80, 81, 82, 83, 84, 86, 94, 95, 102, 103, 104, 107, 110, 111, 112, 113, 114, 118, 119, 120, 121, 122, 124, 125, 127, 128, 129, 130, 131, 133, 134 141, 142 and 184 of TA-36. Permit application forms have been completed for the following outfall:

Form 2C:

1. 36-1-OPN-2 (06A106)

Form 2D:

1. 36-48-OPN-1

Permitting is not recommended for the remaining outfalls, as itemized below:

Discharge of condensate:

1. 36-48-OPN-5
2. 36-48-OPN-6

Discharge of storm water:

1. 36-1-OPN-4	2. 36-1-OPN-5	3. 36-1-OPN-6
4. 36-48-OPN-2	5. 36-48-OPN-4	6. 36-86-OPN-1
7. 36-86-OPN-2	8. 36-141	9. 36-142

Discharges to the new SWSC sanitary sewer system:

1. 36-1-OPN-3	2. 36-22-OPN-1	3. 36-81-OPN-1
4. 36-84-OPN-1		

Discharges to active septic tank systems:

1. 36-55-OPN-1

Buildings with no drains:

1. 36-3	2. 36-4	3. 36-5	4. 36-6
5. 36-7	6. 36-8	7. 36-11	8. 36-12
9. 36-13	10. 36-19	11. 36-20	12. 36-21
13. 36-23	14. 36-44	15. 36-45	16. 36-46
17. 36-47	18. 36-53	19. 36-54	20. 36-56
21. 36-57	22. 36-58	23. 36-67	24. 36-69
25. 36-80	26. 36-82	27. 36-94	28. 36-95
29. 36-102	30. 36-103	31. 36-104	32. 36-110
33. 36-111	34. 36-112	35. 36-113	36. 36-114
37. 36-118	38. 36-119	39. 36-120	40. 36-121

41. 36-122	42. 36-124	43. 36-125	44. 36-127
45. 36-128	46. 36-129	47. 36-130	48. 36-131
49. 36-133	50. 36-134	51. 36-184	

Buildings with French drains:

1. 36-9	2. 36-10	3. 36-83	4. 36-107

Unpermitted discharges:

1. 36-1-OPN-1 2. 36-48-OPN-1

Recommended permitting and corrective actions are outlined in Tables 2 through 8. 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
A/C	Air Conditioning
AD	Area Drain
CD	Cup Drain
ED	Equipment Drain
ESH	Emergency Shower
FD	Floor Drain
LV	Lavatory
RD	Roof Drain
SD	Sink Drain
SH	Shower
SP	Sump Pump
TL	Toilet
UR	Urinal
WF	Water Fountain
WH	Water Heater

TABLE 2: TA 36-1 DRAIN SUMMARY

OUTFALL NUMBER	ID NUMBER	ROOM ACTIVITY	ROOM NUMBER	STATUS OR RECOMMENDATIONS	EPA FORM PREPARED
36-1-OPN-1 DAYLIGHT	1SD3	Storage	8B	Pipe to Sanitary	No
	1SD4	Storage	1B	Pipe to Sanitary	
	1SD5	Machine Shop	2B	Pipe to Sanitary	
	1WF1	Hallway	N/A	Pipe to Sanitary	
36-1-OPN-2 06A106	AD1	Area Drain	Ext	Plugged	Yes
	1FD1	Compressor Room	5B	Containerize	
	1FD2	Locker Room	3B2	Pipe to Sanitary	
	1SD1	Kitchen	N/A	Pipe to Sanitary	
	1SD2	Kitchen	N/A	Pipe to Sanitary	
	2FD2	Photo Processing	8	Pipe to Sanitary	
	2FD3	Restroom	9	Pipe to Sanitary	
	2SD1	Photo Processing	7	Pipe to Sanitary	
	2SD3	Photo Processing	8	Pipe to Sanitary	
	2ED1	Photo Processing	7	Pipe to Sanitary	
	2ED2	Photo Processing	8	Pipe to Sanitary	
36-1-OPN-3 SANITARY	1SD6	Office	3B1	No Change	No
	1LV1	Restroom	3B2	No Change	
	1LV2	Restroom	3B2	No Change	
	1SH1	Restroom	3B2	No Change	
	1TL1	Restroom	3B2	No Change	
	1TL2	Restroom	3B2	No Change	
	1TL3	Restroom	3B2	No Change	
	1UR1	Restroom	3B2	No Change	
	1UR2	Restroom	3B2	No Change	
	2FD1	Photo Processing	6A	No Change	
	2SD2	Janitor Closet	9A	No Change	
	2LV1	Restroom	9	No Change	
	2SH1	Restroom	9	No Change	
	2TL1	Restroom	9	No Change	
	2TL2	Restroom	9	No Change	
	2WF1	Hallway	N/A	No Change	
36-1-OPN-4	RD1	Roof	Ext	No Changes	No
36-1-OPN-5	RD2	Roof	Ext	No Changes	No
36-1-OPN-6	RD3	Roof	Ext	No Changes	No

TABLE 3: TA 36-22 DRAIN SUMMARY

OUTFALL NUMBER	ID NUMBER	ROOM ACTIVITY	ROOM NUMBER	STATUS OR RECOMMENDATIONS	EPA FORM PREPARED
36-22-OPN-1 Sanitary	1LV1	Restroom	101	No Change	No
	1TL1	Restroom	101	No Change	
	1WF1	Security	100	No Change	

TABLE 4: TA 36-48 DRAIN SUMMARY

OUTFALL NUMBER	ID NUMBER	ROOM ACTIVITY	ROOM NUMBER	STATUS OR RECOMMENDATIONS	EPA FORM PREPARED
36-48-OPN-1 Seepage Pit	1SD1	Laboratory	N/A	Remove Sink/Recirc	No
	1CD1	Laboratory	N/A	Remove	
36-48-OPN-2		Gutter Dr	Roof	No Changes	No
36-48-OPN-3		Laboratory	N/A	NOI	No
36-48-OPN-4		Gutter Dr	Roof	No Changes	No
36-48-OPN-5	WH	Prv Condensate	N/A	NOI	No
36-48-OPN-6	A/C	A/C Condensate	N/A	NOI	No

TABLE 5: TA 36-55 DRAIN SUMMARY

OUTFALL NUMBER	ID NUMBER	ROOM ACTIVITY	ROOM NUMBER	STATUS OR RECOMMENDATIONS	EPA FORM PREPARED
36-55-OPN-1 Septic Tank	1LV1	Rest Room	N/A	Verify/Vac Truck	No
	1TL1	Rest Room	N/A	Verify/Vac Truck	

TABLE 6: TA 36-81 DRAIN SUMMARY

OUTFALL NUMBER	ID NUMBER	ROOM ACTIVITY	ROOM NUMBER	STATUS OR RECOMMENDATIONS	EPA FORM PREPARED
36-81-OPN-1 Sanitary	1LV1	Restroom	N/A	No Change	No
	1TL1	Restroom	N/A	No Change	

TABLE 7: TA 36-84 DRAIN SUMMARY

OUTFALL NUMBER	ID NUMBER	ROOM ACTIVITY	ROOM NUMBER	STATUS OR RECOMMENDATIONS	EPA FORM PREPARED
36-84-OPN-1 Sanitary	1FD1	Mech Room	105	No Change	No
	1LV1	Restroom	103	No Change	
	1LV2	Restroom	102	No Change	
	1SD1	Coffee Bar	107	No Change	
	1SD2	Kitchen		No Change	
	1TL1	Restroom	103	No Change	
	1TL2	Restroom	102	No Change	
	1WF1	Hallway		No Change	
	1WF2	Hallway		No Change	

TABLE 8: TA 36-86 DRAIN SUMMARY

OUTFALL NUMBER	ID NUMBER	ROOM ACTIVITY	ROOM NUMBER	STATUS OR RECOMMENDATIONS	EPA FORM PREPARED
36-86-OPN-1 Daylight	1AD1	Storm Water	EXT	No Change	No
	1AD2	Storm Water	EXT	No Change	
	1SP1	Sump Pump	EXT	NOI	
36-86-OPN-2 Daylight	1AD3	Storm Water	EXT	No Change	No
	1AD4	Storm Water	EXT	No Change	
	1SP2	Sump Pump	EXT	NOI	

TABLE 9: TA 36-141/142 DRAIN SUMMARY

OUTFALL NUMBER	ID NUMBER	ROOM ACTIVITY	ROOM NUMBER	STATUS OR RECOMMENDATIONS	EPA FORM PREPARED
36-141-OPN-1 DAYLIGHT	N/A	SEC CONTAIN DRAIN	EXT	NOI	NO

TABLE 10: NON-DRAIN RECOMMENDATIONS

TA #	BLDG. #	ROOM/AREA	RECOMMENDATION
36	1	EXT	DECOMMISSION SEPTIC/ DELETE PERMIT
36	22,81,84	EXT	DECOMMISSION SEPTIC/ DELETE PERMIT
36	48	EXT	DELETE SEEPAGE PIT

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TA	BLDG	OUTLET PIPING NO	EPA OUTFALL #	DRAIN #	ROOM #	ROOM DESCRIPTION	FLOW RATE		PERIODICITY	SEASONAL	SOURCE TYPES
36	1	36-1	SEPTIC TANK	N/A	EXT.	SEPTIC TANK			NO FLOW	no	NONE
36	1	36-1-OPN-1	N/A	1SD3	8B	STORAGE			5 DAYS PER WEEK	no	SANITARY WASTE
36	1	36-1-OPN-1	N/A	1SD4	1B	MECHANICAL ROOM			5 DAYS PER WEEK	no	SANITARY WASTE
36	1	36-1-OPN-1	N/A	1SD5	2B	MECHANICAL			5 DAYS PER WEEK	no	SANITARY WASTE
36	1	36-1-OPN-1	N/A	1WF1		HALLWAY			5 DAYS A WEEK	no	DRINKING WATER
36	1	36-1-OPN-2	06A106	1FD1	5-B	EQUIPMENT ROOM			FLOW IS NIL	no	BFP
36	1	36-1-OPN-2	06A106	1FD1	5-B	EQUIPMENT ROOM	12	GPD	5 DAYS PER WEEK	no	AIR COMPRESSOR BLOW DOWN
36	1	36-1-OPN-2	06A106	1FD1	5-B	EQUIPMENT ROOM			FLOW IS NIL	no	WATER HEATER PRVs (2)
36	1	36-1-OPN-2	06A106	1FD1	5-B	EQUIPMENT ROOM			FLOW IS NIL	no	BOILER DRAIN
36	1	36-1-OPN-2	06A106	1FD2	3B-2	LOCKER ROOM			5 DAYS PER WEEK	no	FLOOR WASHINGS
36	1	36-1-OPN-2	06A106	1SD1	4B-2	KITCHEN			5 DAYS PER WEEK	no	DISH WASHINGS
36	1	36-1-OPN-2	06A106	1SD2	4B-2	KITCHEN			5 DAYS PER WEEK	no	DISH WASHINGS
36	1	36-1-OPN-2	06A106	2ED1	7	PHOTO PROCESSING	1	GPM	3 DAYS PER WEEK	no	PHOTO RINSE
36	1	36-1-OPN-2	06A106	2ED2	8	PHOTO PROCESSING			5 DAYS PER WEEK	no	PHOTO RINSE WATER FROM 2SD3
36	1	36-1-OPN-2	06A106	2FD2	7	PHOTO PROCESSING			5 DAYS PER WEEK	no	FLOOR WASHINGS
36	1	36-1-OPN-2	06A106	2FD3	9	RESTROOM			5 DAYS PER WEEK	no	FLOOR WASHINGS
36	1	36-1-OPN-2	06A106	2SD1	7	PHOTO PROCESSING	1	GPM	3 DAYS PER WEEK	no	PHOTO RINSE WATER
36	1	36-1-OPN-2	06A106	2SD3	8	PHOTO PROCESSING			3 DAYS PER WEEK	no	PHOTO RINSE WATER
36	1	36-1-OPN-2	06A106	AD1	EXT.	AREA DRAIN			PLUGGED	no	NO FLOW
36	1	36-1-OPN-3	01S VIA 13S	1SD6	3B-1	OFFICE			5 DAYS PER WEEK	no	HAND WASHINGS
36	1	36-1-OPN-3	01S VIA 13S	1SH1	3B-2	RESTROOM			5 DAYS PER WEEK	no	SANITARY WASTE
36	1	36-1-OPN-3	01S VIA 13S	1TL1	3B-2	RESTROOM			5 DAYS PER WEEK	no	SANITARY WASTE
36	1	36-1-OPN-3	01S VIA 13S	1TL2	3B-2	RESTROOM			5 DAYS PER WEEK	no	SANITARY WASTE
36	1	36-1-OPN-3	01S VIA 13S	1TL3	3B-2	RESTROOM			5 DAYS PER WEEK	no	SANITARY WASTE
36	1	36-1-OPN-3	01S VIA 13S	1UR1	3B-2	RESTROOM			5 DAYS PER WEEK	no	SANITARY WASTE
36	1	36-1-OPN-3	01S VIA 13S	1UR2	3B-2	RESTROOM			5 DAYS PER WEEK	no	SANITARY WASTE
36	1	36-1-OPN-3	01S VIA 13S	2FD1	7	PHOTO PROCESSING	2	GPM	5 DAYS PER WEEK	no	PHOTO RINSE WATER DRAINS (2)
36	1	36-1-OPN-3	01S VIA 13S	2LV1	9	RESTROOM			5 DAYS PER WEEK	no	HAND WASHINGS
36	1	36-1-OPN-3	01S VIA 13S	2SD2	9A	JANITORS CLOSET			5 DAYS PER WEEK	no	CLEAN UP
36	1	36-1-OPN-3	01S VIA 13S	2SH1	9	RESTROOM			5 DAYS PER WEEK	no	SANITARY WASTE
36	1	36-1-OPN-3	01S VIA 13S	2TL1	9	RESTROOM			5 DAYS PER WEEK	no	SANITARY WASTE
36	1	36-1-OPN-3	01S VIA 13S	2TL2	9	RESTROOM			5 DAYS PER WEEK	no	SANITARY WASTE
36	1	36-1-OPN-3	01S VIA 13S	2WF1		HALLWAY			5 DAYS A WEEK	no	DRINKING WATER

REPORT # 13

TA	BLDG	OUTLET PIPING NO	EPA OUTFALL #	DRAIN #	ROOM #	ROOM DESCRIPTION	FLOW RATE		PERIODICITY	SEASONAL	SOURCE TYPES
36	1	36-1-OPN-4	N/A	RD1	EXT.	ROOF			MOSTLY SUMMER	yes	RAIN
36	1	36-1-OPN-5	N/A	RD2	EXT.	ROOF			MOSTLY SUMMER	yes	RAIN
36	1	36-1-OPN-6	N/A	RD3	EXT.	ROOF			MOSTLY SUMMER	yes	RAIN
36	3	36-3	N/A	N/A		CONTROL BUILDING			NONE	no	NO SOURCES
36	4	36-4	N/A	N/A		PREPARATION BUILDING			NONE	no	NO SOURCES
36	5	36-5	N/A	N/A		PREPARATION BUILDING			NONE	no	NO SOURCES
36	6	36-6	N/A	N/A		CONTROL BUILDING			NONE	no	NO SOURCES
36	7	36-7	N/A	N/A		PREPARATION BUILDING			NONE	no	NO SOURCES
36	8	36-8	N/A	N/A		CONTROL BUILDING			NONE	no	NO SOURCES
36	9	36-9	N/A	N/A		MAGAZINE			NONE	no	NO SOURCES
36	10	36-10	N/A	N/A		MAGAZINE			NONE	no	NO SOURCES
36	11	36-11	N/A	N/A		PREPARATION BUILDING			NONE	no	NO SOURCES
36	12	36-12	N/A	N/A		CONTROL BUILDING			NONE	no	NO SOURCES
36	13	36-13	N/A	N/A		INSTRUMENT CHAMBER			NONE	no	NO SOURCES
36	19	36-19	N/A	N/A		INSTRUMENT CHAMBER			NONE	no	NO SOURCES
36	20	36-20	N/A	N/A		INSTRUMENT CHAMBER			NONE	no	NO SOURCES
36	21	36-21	N/A	N/A		DOUBLE FIRING BOX			NONE	no	NO SOURCES
36	22	36-22	SEPTIC TANK	N/A	EXT.	SEPTIC TANK			NO FLOW	no	NONE
36	22	36-22-OPN-1	01S VIA 13S	1LV1	101	RESTROOM			5 DAYS PER WEEK	no	HAND WASHINGS
36	22	36-22-OPN-1	01S VIA 13S	1TL1	101	RESTROOM			5 DAYS PER WEEK	no	SANITARY WASTE
36	22	36-22-OPN-1	01S VIA 13S	1WF1	100	SECURITY			5 DAYS A WEEK	no	SANITARY WASTE
36	23	36-23	N/A	N/A		ANTENNA TOWER			NONE	no	NO SOURCES
36	44	36-44	N/A	N/A		STORAGE BUILDING			NONE	no	NO SOURCES
36	45	36-45	N/A	N/A		STORAGE BUILDING			NONE	no	NO SOURCES
36	46	36-46	N/A	N/A		STORAGE BUILDING			NONE	no	NO SOURCES
36	47	36-47	N/A	N/A		STORAGE BUILDING			NONE	no	NO SOURCES
36	48	36-48	N/A	N/A	EXT.	SEEPAGE PIT				no	
36	48	36-48-OPN-1	N/A	1CD1		LABORATORY			FLOW IS NIL	no	FUME HOOD CUP DRAIN
36	48	36-48-OPN-1	N/A	1SD1		LABORATORY	2	GPM	2-3 DAYS PER YEAR	no	NON-CONTACT COOLING WATER
36	48	36-48-OPN-1	N/A	1SD1		LABORATORY	2	GPM	2-3 DAYS PER YEAR	no	NON-CONTACT COOLING WATER
36	48	36-48-OPN-2	N/A	N/A	ROOF	GUTTER DRAIN			MAINLY SUMMER	yes	RAIN
36	48	36-48-OPN-3	N/A	N/A		COOLING WATER			FLOW IS NIL	no	WATER DRAIN
36	48	36-48-OPN-4	N/A	N/A	ROOF	GUTTER DRAIN			MAINLY SUMMER	yes	RAIN

REPORT # 13

TA	BLDG	OUTLET PIPING NO	EPA OUTFALL #	DRAIN #	ROOM #	ROOM DESCRIPTION	FLOW RATE		PERIODICITY	SEASONAL	SOURCE TYPES
36	48	36-48-OPN-5	N/A	N/A		WATER HEATER PRV			FLOW IS NIL	no	WATER HEATER PRV
36	48	36-48-OPN-6	N/A	N/A	N/A	A/C CONDENSATE			FLOW IS NIL	no	A/C CONDENSATE
36	53	36-53	N/A	N/A		STORAGE BUILDING			NONE	no	NO SOURCES
36	54	36-54	N/A	N/A		TRACTOR SHED			NONE	no	NO SOURCES
36	55	36-55-OPN-1	N/A	1LV1		RESTROOM			5 DAYS PER WEEK	no	SANITARY WASTE
36	55	36-55-OPN-1	N/A	1TL1		RESTROOM			5 DAYS PER WEEK	no	SANITARY WASTE
36	56	36-56	N/A	N/A		GUN EMPLACEMENT			NONE	no	NO SOURCES
36	57	36-57	N/A	N/A		OFFICE TRAILER			NONE	no	NO SOURCES
36	58	36-58	N/A	N/A		OFFICE TRAILER			NONE	no	NO SOURCES
36	67	36-67	N/A	N/A		ELECTRONICS TRAILER			NONE	no	NO SOURCES
36	69	36-69	N/A	N/A		SECURITY PRECINCT FACILITY			NONE	no	NO SOURCES
36	80	36-80	N/A	N/A		OFFICE TRAILER			NONE	no	NO SOURCES
36	81	36-81	SEPTIC TANK	N/A	EXT.	SEPTIC TANK			NO FLOW	no	NONE
36	81	36-81-OPN-1	01S VIA 13S	1LV1		RESTROOM			5 DAYS PER WEEK	no	SANITARY WASTE
36	81	36-81-OPN-1	01S VIA 13S	1TL1		RESTROOM			5 DAYS PER WEEK	no	SANITARY WASTE
36	82	36-82	N/A	N/A		RESEARCH TRAILER			NONE	no	NO SOURCES
36	83	36-83	N/A	N/A		STORAGE MAGAZINE			NONE	no	NO SOURCES
36	84	36-84	SEPTIC TANK	N/A	EXT.	SEPTIC TANK			NO FLOW	no	NONE
36	84	36-84-OPN-1	01S VIA 13S	1FD1	105	MECHANICAL ROOM			5 DAYS PER WEEK	no	FLOOR WASHINGS
36	84	36-84-OPN-1	01S VIA 13S	1LV1	103	RESTROOM			5 DAYS PER WEEK	no	HAND WASHINGS
36	84	36-84-OPN-1	01S VIA 13S	1LV2	102	RESTROOM			5 DAYS PER WEEK	no	HAND WASHINGS
36	84	36-84-OPN-1	01S VIA 13S	1SD1	107	COFFEE BAR			5 DAYS PER WEEK	no	DISH WASHINGS
36	84	36-84-OPN-1	01S VIA 13S	1SD2		KITCHEN			5 DAYS PER WEEK	no	DISH WASHINGS
36	84	36-84-OPN-1	01S VIA 13S	1TL1	103	RESTROOM			5 DAYS PER WEEK	no	SANITARY WASTE
36	84	36-84-OPN-1	01S VIA 13S	1TL2	102	RESTROOM			5 DAYS PER WEEK	no	SANITARY WASTE
36	84	36-84-OPN-1	01S VIA 13S	1WF1		HALLWAY	2	GPD	5 DAYS A WEEK	no	DRINKING WATER
36	84	36-84-OPN-1	01S VIA 13S	1WF2		HALLWAY			5 DAYS PER WEEK	no	WATER FOUNTAIN
36	86	36-86-OPN-1	N/A	1AD1	EXT.	STORM WATER			MOSTLY SUMMER	yes	RAIN
36	86	36-86-OPN-1	N/A	1AD2	EXT.	STORM WATER			MOSTLY SUMMER	yes	RAIN
36	86	36-86-OPN-1	N/A	1SP1	EXT.	SUMP PUMP			MOSTLY SUMMER	yes	RAIN
36	86	36-86-OPN-2	N/A	1AD3	EXT.	STORM WATER			MOSTLY SUMMER	yes	RAIN
36	86	36-86-OPN-2	N/A	1AD4	EXT.	STORM WATER			MOSTLY SUMMER	yes	RAIN
36	86	36-86-OPN-2	N/A	1SP2	EXT.	SUMP PUMP			MOSTLY SUMMER	yes	RAIN

REPORT # 13

TA	BLDG	OUTLET PIPING NO	EPA OUTFALL #	DRAIN #	ROOM #	ROOM DESCRIPTION	FLOW RATE		PERIODICITY	SEASONAL	SOURCE TYPES
36	94	36-94	N/A	N/A		TRANSPORTAINER			NONE	no	NO SOURCES
36	95	36-95	N/A	N/A		TRANSPORTAINER			NONE	no	NO SOURCES
36	102	36-102	N/A	N/A		TRANSPORTAINER			NONE	no	NO SOURCES
36	103	36-103	N/A	N/A		TRANSPORTAINER			NONE	no	NO SOURCES
36	104	36-104	N/A	N/A		SHED			NONE	no	NO SOURCES
36	107	36-107	N/A	N/A		CONCRETE BUNKER			NONE	no	NO SOURCES
36	110	36-110	N/A	N/A		TRANSPORTAINER			NONE	no	NO SOURCES
36	111	36-111	N/A	N/A		TRANSPORTAINER			NONE	no	NO SOURCES
36	112	36-112	N/A	N/A		TRANSPORTAINER			NONE	no	NO SOURCES
36	113	36-113	N/A	N/A		TRANSPORTAINER			NONE	no	NO SOURCES
36	114	36-114	N/A	N/A		TRANSPORTAINER			NONE	no	NO SOURCES
36	118	36-118	N/A	N/A		TRANSPORTAINER			NONE	no	NO SOURCES
36	119	36-119	N/A	N/A		TRANSPORTAINER			NONE	no	NO SOURCES
36	120	36-120	N/A	N/A		CONTROL BUILDING			NONE	no	NO SOURCES
36	121	36-121	N/A	N/A		TRANSPORTAINER			NONE	no	NO SOURCES
36	122	36-122	N/A	N/A		TRANSPORTAINER			NONE	no	NO SOURCES
36	124	36-124	N/A	N/A		TRANSPORTAINER			NONE	no	NO SOURCES
36	125	36-125	N/A	N/A		TRANSPORTAINER			NONE	no	NO SOURCES
36	127	36-127	N/A	N/A		STORAGE TRAILER			NONE	no	NO SOURCES
36	128	36-128	N/A	N/A		BUILDING			NONE	no	NO SOURCES
36	129	36-129	N/A	N/A		TRANSPORTAINER			NONE	no	NO SOURCES
36	130	36-130	N/A	N/A		TRANSPORTAINER			NONE	no	NO SOURCES
36	131	36-131	N/A	N/A		TRANSPORTAINER			NONE	no	NO SOURCES
36	133	36-133	N/A	N/A		MORGAN SHED			NONE	no	NO SOURCES
36	134	36-134	N/A	N/A		TRANSPORTAINER			NONE	no	NO SOURCES
36	141	36-141-OPN-1	N/A	N/A		OIL TANK SECONDARY CONTAINMEN			MOSTLY SUMMER	no	RAIN
36	142	36-142-OPN-1	N/A	N/A		OIL TANK SECONDARY CONTAINMEN			MOSTLY SUMMER	no	RAIN
36	184	36-184	N/A	N/A		TRANSPORTAINER			NONE	no	NO SOURCES

Please print or type in the unshaded areas only.

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

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

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.	
06A106	35	50	19	106	16	22	Tributaries to Three Mile Canyon

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	
106	TA 36-1				
	1. Photo rinse	7200 GPW	Silver Recovery	2-L	
	2. Floor washings	10 GPW	None		
	3. Kithchen sinks	125 GPW	None		
	4. Air compressor blow down	60 GPW	None		
	5. Boiler blow down	125 GPW	None		
	6. Back flow preventer	Flow is nil	None		
	7 Water heater PRV	Flow is nil	None		
	Total	7520 GPW			

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?

[X] 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)*
106	Photo Rinse Water	3	12	2.4 x 10 -3	2.4 x 10 -3	2400 GPD	2400 GPD	8 hr/dat

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)* [X] 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)*
N/A			

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
N/A					

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

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

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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
N/A			

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)*

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)*

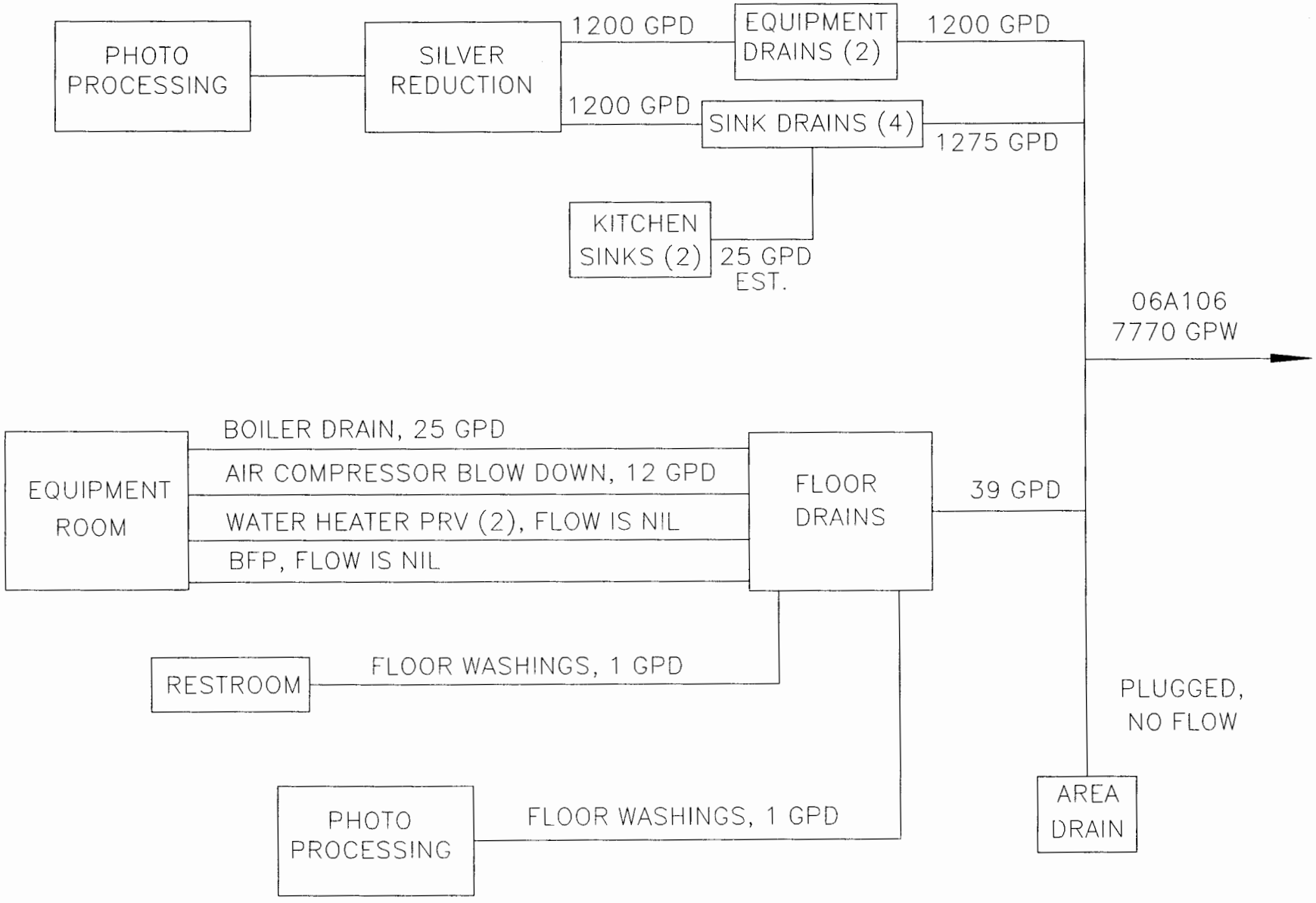
A. NAME	B. ADDRESS	C. TELEPHONE *(area code & no.)*	D. POLLUTANTS ANALYZED *(list)*

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.)*
JOSEPH VOEZELLA, DOE AREA MANAGER	505-667-5105
ALLEN J. TIEDMAN, ASSOC. DIRECTOR FOR OPERATIONS	505-667-9390
C. SIGNATURE	D. DATE SIGNED

06A106 FLOW SCHEMATIC



NOTE: SILVER REDUCTION OPERATIONS RUN 8 HOURS A DAY, 3 DAYS A WEEK.

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

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

OUTFALL NO. 06A106

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	(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	3. UNITS (specify if blank) a. CONCENTRATION	b. MASS	4. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
a. Biochemical Oxygen Demand *(BOD)*	33.6	318.4						mg/l	g/d			
b. Chemical Oxygen Demand *(COD)*	35.0	331.7						mg/l	g/d			
c. Total Organic Carbon *(TOC)*	6.1	57.8						mg/l	g/d			
d. Total Suspended Solids *(TSS)*	1.0	9.5						mg/l	g/d			
e. Ammonia *(as N)*	7.5	71.082						mg/l	g/d			
f. Flow	VALUE 2504		VALUE		VALUE			gal/day		VALUE		
g. Temperature *(winter)*	VALUE 2.31		VALUE		VALUE			°C		VALUE		
h. Temperature *(summer)*	VALUE N/A		VALUE		VALUE			°C		VALUE		
i. pH	MINIMUM 7.0	MAXIMUM 8.8	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	b. 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
a. Bromide (24959-67-9)	X		< 3.1	< 29.4						mg/l	g/d			
b. Chlorine, Total Residual		X	0.0	0.0						mg/l	mg/d			
c. Color	X		10							units				
d. Fecal Coliform		X												
e. Fluoride (16984-48-8)	X		0.3	2.8						mg/l	g/d			
f. Nitrate-Nitrite *(as N)*	X		0.357	3.4						mg/l	g/d			

CONTINUE ON REVERSE

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X' a. BELIEVED PRESENT	b. 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
g. Nitrogen, Total Organic (as N)	X		< 15.6	< 147.9						mg/l	g/d			
h. Oil and Grease	X		< 4.22	< 40.0						mg/l	g/d			
i. Phosphorus (as P), Total (7723-14-0)	X		0.156	1.5						mg/l	g/d			
j. Radioactivity														
(1) Alpha, Total	X		0.5	4.7						pCi/l	nCi/d			
(2) Beta, Total	X		6.7	63.5						pCi/l	nCi/d			
(3) Radium, Total	X													
(4) Radium 226, Total	X		0.05	0.5						pCi/l	nCi/d			
k. Sulfate (as SO_4) (14808-79-8)	X		77.3	732.6						mg/l	g/d			
l. Sulfide (as S)		X	< .05	< 0.5						mg/l	g/d			
m. Sulfite (as SO_3) (14265-45-3)	X		13.1	124.2						mg/l	g/d			
n. Surfactants	X		0.1	0.9						mg/l	g/d			
o. Aluminum, Total (7429-90-5)	X		0.56	5.3						mg/l	g/d			
p. Barium, Total (7440-39-3)	X		0.03	0.3						mg/l	g/d			
q. Boron, Total (7440-42-8)	X		0.52	4.9						mg/l	g/d			
r. Cobalt, Total (7440-48-4)		X	< 0.1	< 0.9						mg/l	g/d			
s. Iron, Total (7439-89-6)	X		0.74	7.0						mg/l	g/d			
t. Magnesium, Total (7439-95-4)	X		3.3	23.7						mg/l	g/d			
u. Molybdenum, Total (7439-98-7)		X	< 0.02	< 0.2						mg/l	g/d			
v. Manganese, Total (7439-96-5)	X		0.01	94.8						mg/l	mg/d			
w. Tin, Total (7440-31-5)		X	< 0.050	< 0.5						mg/l	g/d			
x. Titanium, Total (7440-32-6)		X	< 0.004	< 37.9						mg/l	mg/d			

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EPA I.D. NUMBER (copy from Item 1 of Form 1)	OUTFALL NUMBER
NM0890010515	06A106

Form Approved.
OMB No. 2040-0086
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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	< 0.5						mg/l	g/d			
2M. Arsenic, Total (7440-38-2)			X	< 0.002	< 19.0						mg/l	mg/d			
3M. Beryllium, Total, 7440-41-7)			X	< 0.001	< 9.5						mg/l	mg/d			
4M. Cadmium, Total (7440-43-9)			X	< 0.010	< 94.8						mg/l	mg/d			
5M. Chromium, Total (7440-47-3)		X		0.087	0.8						mg/l	g/d			
6M. Copper, Total (7440-50-8)		X		0.052	0.5						mg/l	g/d			
7M. Lead, Total (7439-92-1)			X	< 0.050	< 0.5						mg/l	g/d			
8M. Mercury, Total (7439-97-6)			X	< 0.0002	< 1.9						mg/l	mg/d			
9M. Nickel, Total (7440-02-0)		X		0.16	1.5						mg/l	g/d			
10M. Selenium, Total (7782-49-2)		X		0.001	9.5						mg/l	mg/d			
11M. Silver, Total (7440-22-4)		X		0.214	2.0						mg/l	g/d			
12M. Thallium, Total (7440-28-0)		X		1	9.5						mg/l	g/d			
13M. Zinc, Total (7440-66-6)			X	< 0.045	< 0.4						mg/l	g/d			
14M. Cyanide, Total (57-12-5)		X		0.01	< 94.8						mg/l	mg/d			
15M. Phenols, Total			X	< 0.01	< 94.8						mg/l	mg/d			
DIOXIN															
2,3,7,8-Tetrachlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

CONTINUE ON REVERSE

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		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	
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Acrolein (107-02-8)			X												
2V. Acrylonitrile (107-13-1)			X												
3V. Benzene (71-43-2)			X	< 0.005	< 47.4						mg/l	mg/d			
4V. Bis (Chloromethyl) Ether (542-88-1)			X												
5V. Bromoform (75-25-2)			X	< 0.005	< 47.4						mg/l	mg/d			
6V. Carbon Tetrachloride (56-23-5)			X	< 0.005	< 47.4						mg/l	mg/d			
7V. Chlorobenzene (108-90-7)			X	< 0.005	< 47.4						mg/l	mg/d			
8V. Chlorodibromomethane (124-48-1)			X	< 0.005	< 47.4						mg/l	mg/d			
9V. Chloroethane (75-00-3)			X	< 0.010	< 0.1						mg/l	mg/d			
10V. 2-Chloroethylvinyl Ether (110-75-8)			X												
11V. Chloroform (67-66-3)			X	< 0.005	< 47.4						mg/l	mg/d			
12V. Dichlorobromomethane (75-27-4)			X	< 0.005	< 47.4						mg/l	mg/d			
13V. Dichlorodifluoromethane (75-71-8)			X												
14V. 1,1-Dichloroethane (75-34-3)			X	< 0.005	< 47.4						mg/l	mg/d			
15V. 1,2-Dichloroethane (107-06-2)			X	< 0.005	< 47.4						mg/l	mg/d			
16V. 1,1-Dichloroethylene (75-35-4)			X	< 0.005	< 47.4						mg/l	mg/d			
17V. 1,2-Dichloropropane (78-87-5)			X	< 0.005	< 47.4						mg/l	kg/d			
18V. 1,3-Dichloropropylene (542-75-6)			X	<	< 0.0						mg/l	mg/d			
19V. Ethylbenzene (100-41-4)			X	< 0.005	< 47.4						mg/l	mg/d			
20V. Methyl Bromide (74-83-9)			X	< 0.010	< 94.8						mg/l	mg/d			
21V. Methyl Chloride (74-87-3)			X	< 0.010	< 94.8						mg/l	mg/d			

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EPA I.D. NUMBER (copy from Item 1 of Form 1): NM0890010515
OUTFALL NUMBER: 06A106

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Approval expires 7-31-88

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	< 47.4						mg/l	mg/d			
23V. 1,1,2,2-Tetrachloroethane (79-34-5)			X	< 0.005	< 47.4						mg/l	mg/d			
24V. Tetrachloroethylene (127-18-4)			X	< 0.005	< 47.4						mg/l	mg/d			
25V. Toluene (108-88-3)			X	< 0.005	< 47.4						mg/l	mg/d			
26V. 1,2-Trans-Dichloroethylene (156-60-5)			X	< 0.005	< 47.4						mg/l	mg/d			
27V. 1,1,1-Trichloroethane (71-55-6)			X	< 0.005	< 47.4						mg/l	mg/d			
28V. 1,1,2-Trichloroethane (79-00-5)			X	< 0.005	< 47.4						mg/l	mg/d			
29V. Trichloroethylene (79-01-6)			X	< 0.005	< 47.4						mg/l	mg/d			
30V. Trichlorofluoromethane (75-69-4)			X	< 0.005	< 47.4						mg/l	mg/d			
31V. Vinyl Chloride (75-01-4)			X	< 0.010	< 94.8						mg/l	mg/d			
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)			X	< 0.010	< 94.8						mg/l	mg/d			
2A. 2,4-Dichlorophenol (120-83-2)			X	< 0.010	< 94.8						mg/l	mg/d			
3A. 2,4-Dimethylphenol (105-67-9)			X	< 0.010	< 94.8						mg/l	mg/d			
4A. 4,6-Dinitro-O-Cresol (534-52-1)			X	< 0.010	< 94.8						mg/l	mg/d			
5A. 2,4-Dinitrophenol (51-28-5)			X	< 0.010	< 94.8						mg/l	mg/d			
6A. 2-Nitrophenol (88-75-5)			X	< 0.010	< 94.8						mg/l	mg/d			
7A. 4-Nitrophenol (100-02-7)			X	< 0.010	< 94.8						mg/l	mg/d			
8A. P-Chloro-M-Cresol (59-50-7)			X	< 0.010	< 94.8						mg/l	mg/d			
9A. Pentachlorophenol (87-86-5)			X	< 0.010	< 94.8						mg/l	mg/d			
10A. Phenol (108-95-2)			X	< 0.010	< 94.8						mg/l	mg/d			
11A. 2,4,6-Trichlorophenol (88-06-2)			X	< 0.010	< 94.8						mg/l	mg/d			

CONTINUE ON REVERSE

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		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	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)			X	< 0.010	< 94.8						mg/l	mg/d			
2B. Acenaphtylene (208-96-8)			X	< 0.010	< 94.8						mg/l	mg/d			
3B. Anthracene (120-12-7)			X	< 0.010	< 94.8						mg/l	mg/d			
4B. Benzidine (92-87-5)			X	< 0.010	< 94.8						mg/l	mg/d			
5B. Benzo *(a)* Anthracene (56-55-3)			X	< 0.010	< 94.8						mg/l	mg/d			
6B. Benzo *(a)* Pyrene (50-32-8)			X	< 0.010	< 94.8						mg/l	mg/d			
7B. 3,4-Benzo-fluoranthene (205-99-2)			X	< 0.010	< 94.8						mg/l	mg/d			
8B. Benzo *(ghi)* Perylene (191-24-2)			X	< 0.010	< 94.8						mg/l	mg/d			
9B. Benzo *(k)* Fluoranthene (207-08-9)			X	< 0.010	< 94.8						mg/l	mg/d			
10B. Bis *(2-Chloro-ethoxy)* Methane (111-91-1)			X	< 0.010	< 94.8						mg/l	mg/d			
11B. Bis *(2-Chloro-ethyl)* Ether (111-44-4)			X	< 0.010	< 94.8						mg/l	mg/d			
12B. Bis *(2-Chloroiso-propyl)* Ether (102-60-1)			X	< 0.010	< 94.8						mg/l	mg/d			
13B. Bis *(2-Ethyl-hexyl)* Phthalate (117-81-7)			X	< 0.010	< 94.8						mg/l	mg/d			
14B. 4-Bromo-phenyl Phenyl Ether (101-55-3)			X	< 0.010	< 94.8						mg/l	mg/d			
15B. Butyl Benzyl Phthalate (85-68-7)			X	< 0.010	< 94.8						mg/l	mg/d			
16B. 2-Chloro-naphthalene (91-58-7)			X	< 0.010	< 94.8						mg/l	mg/d			
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)			X	< 0.010	< 94.8						mg/l	mg/d			
18B. Chrysene (218-01-9)			X	< 0.010	< 94.8						mg/l	mg/d			
19B. Dibenzo *(a,h)* Anthracene (53-70-3)			X	< 0.010	< 94.8						mg/l	mg/d			
20B. 1,2-Dichloro-benzene (95-50-1)			X	< 0.010	< 94.8						mg/l	mg/d			
21B. 1,3-Dichloro-benzene (541-73-1)			X	< 0.010	< 94.8						mg/l	mg/d			

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EPA I.D. NUMBER (copy from Item 1 of Form 1)	OUTFALL NUMBER
NM0890010515	06A106

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

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	< 94.8						mg/l	mg/d			
23B. 3,3'-Dichlorobenzidine (91-94-1)			X	< 0.010	< 94.8						mg/l	mg/d			
24B. Diethyl Phthalate (84-66-2)			X	< 0.010	< 94.8						mg/l	mg/d			
25B. Dimethyl Phthalate (131-11-3)			X	< 0.010	< 94.8						mg/l	mg/d			
26B. Di-N-Butyl Phthalate (84-74-2)			X	< 0.010	< 94.8						mg/l	mg/d			
27B. 2,4-Dinitrotoluene (121-14-2)			X	< 0.010	< 94.8						mg/l	mg/d			
28B. 2,6-Dinitrotoluene (606-20-2)			X	< 0.010	< 94.8						mg/l	mg/d			
29B. Di-N-Octyl Phthalate (117-84-0)			X	< 0.010	< 94.8						mg/l	mg/d			
30B. 1,2-Diphenylhydrazine (as Azobenzene) (122-66-7)			X	< 0.010	< 94.8						mg/l	mg/d			
31B. Fluoranthene (206-44-0)			X	< 0.010	< 94.8						mg/l	mg/d			
32B. Fluorene (86-73-7)		X		.00028	2.7						mg/l	mg/d			
33B. Hexachlorobenzene (118-74-1)			X	< 0.010	< 94.8						mg/l	mg/d			
34B. Hexachlorobutadiene (87-68-3)			X	< 0.010	< 94.8						mg/l	mg/d			
35B. Hexachlorocyclopentadiene (77-47-4)			X	< 0.010	< 94.8						mg/l	mg/d			
36B. Hexachloroethane (67-72-1)			X	< 0.010	< 94.8						mg/l	mg/d			
37B. Indeno (1,2,3-cd) Pyrene (193-39-5)			X	< 0.010	< 94.8						mg/l	mg/d			
38B. Isophorone (78-59-1)			X	< 0.010	< 94.8						mg/l	mg/d			
39B. Naphthalene (91-20-3)			X	< 0.010	< 94.8						mg/l	mg/d			
40B. Nitrobenzene (98-95-3)			X	< 0.010	< 94.8						mg/l	mg/d			
41B. N-Nitrosodimethylamine (62-75-9)			X	< 0.010	< 94.8						mg/l	mg/d			
42B. N-Nitrosodi-N-Propylamine (621-64-7)			X	< 0.010	< 94.8						mg/l	mg/d			

CONTINUED FROM THE FRONT

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)*															
43B. N-Nitrosodiphenylamine (86-30-6)			X	< 0.010	< 94.8						mg/l	mg/d			
44B. Phenanthrene (85-01-8)			X	< 0.010	< 94.8						mg/l	mg/d			
45B. Pyrene (129-00-0)			X	< 0.010	< 94.8						mg/l	mg/d			
46B. 1,2,4-Trichlorobenzene (120-82-1)			X	< 0.010	< 94.8						mg/l	mg/d			
GC/MS FRACTION — PESTICIDES															
1P. Aldrin (309-00-2)			X	< 0.06	< 0.6						ug/l	ug/d			
2P. α-BHC (319-84-6)			X	< 0.04	< 0.4						ug/l	ug/d			
3P. β-BHC (319-85-7)			X	< 0.1	< 0.9						ug/l	ug/d			
4P. γ-BHC (58-89-9)			X	< 0.06	< 0.6						ug/l	ug/d			
5P. δ-BHC (319-86-8)			X	< 0.12	< 1.1						ug/l	ug/d			
6P. Chlordane (57-74-9)			X	< 0.25	< 2.4						ug/l	ug/d			
7P. 4,4'-DDT (50-29-3)			X	< 0.06	< 0.6						ug/l	ug/d			
8P. 4,4'-DDE (72-55-9)			X	< 0.08	< 0.8						ug/l	ug/d			
9P. 4,4'-DDD (72-54-8)			X	< 0.08	< 0.8						ug/l	ug/d			
10P. Dieldrin (60-57-1)			X	< 0.08	< 0.8						ug/l	ug/d			
11P. α-Endosulfan (115-29-7)			X	< 0.05	< 0.5						ug/l	ug/d			
12P. β-Endosulfan (115-29-7)			X	< 0.08	< 0.8						ug/l	ug/d			
13P. Endosulfan Sulfate (1031-07-8)			X	< 0.07	< 0.7						ug/l	ug/d			
14P. Endrin (72-20-8)			X	< 0.06	< 0.6						ug/l	ug/d			
15P. Endrin Aldehyde (7421-93-4)			X	< 0.31	< 2.9						ug/l	ug/d			
16P. Heptachlor (76-44-8)			X	< 0.3	< 2.8						ug/l	mg/d			

 CONTINUE ON PAGE V-9

CONTINUED FROM PAGE V-8

EPA I.D. NUMBER (copy from Item I of Form 1)	OUTFALL NUMBER
NM0890010515	06A106

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

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		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	
GC/MS FRACTION – PESTICIDES (continued)															
17P. Heptachlor Epoxide (1024-57-3)			X	< 0.08	< 0.8						ug/l	ug/d			
18P. PCB-1242 (53469-21-9)			X	< 0.78	< 7.4						ug/l	ug/d			
19P. PCB-1254 (11097-69-1)			X	< 0.78	< 7.4						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	< 0.78	< 7.4						ug/l	ug/d			
24P. PCB-1016 (12674-11-2)			X	N.D.											
25P. Toxaphene (8001-35-2)			X	< 2.5	< 23.7						ug/l	mg/d			

Please type or print in the unshaded areas only

EPA ID Number *(copy from Item 1 of Form 1)*
NM0890010515

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

Form **2D** NPDES

EPA New Sources and New Dischargers Application for Permit to Discharge Process Wastewater

I. Outfall Location

For each outfall, list the latitude and longitude, and the name of the receiving water.

Outfall Number *(list)*	Latitude			Longitude			Receiving Water *(name)*
	Deg	Min	Sec	Deg	Min	Sec	
36-1-OPN-1	35	50	19	106	16	22	Tributary to Three Mile Canyon

II. Discharge Date *(When do you expect to begin discharging?)*

ACTIVE DISCHARGE OBSERVED DURING WASTE STREAM CHARACTERIZATION STUDY.

III. Flows, Sources of Pollution, and Treatment Technologies

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

Outfall Number	1. Operations Contributing Flow *(list)*	2. Average Flow *(include units)*	3. Treatment *(Description or List Codes from Table 2D-1)*
OPN-1	Sink drains (3) (hand washing)	30 GPD	None
	Water fountain	5 GPD	None

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)*

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)*

 CONTINUE ON NEXT PAGE

CONTINUED FROM THE FRONT	EPA ID Number *(copy from Item 1 of Form 1)* NM0890010515	Outfall Number 36-1-OPN-1

V. Effluent Characteristics

A, and B: These items require you to report estimated amounts *(both concentration and mass)* of the pollutants to be discharged from each of your outfalls. Each part of this item addresses a different set of pollutants and should be completed in accordance with the specific instructions for that part. Data for each outfall should be on a separate page. Attach additional sheets of paper if necessary.

General Instructions *(See table 2D-2 for Pollutants)*

Each part of this item requests you to provide an estimated daily maximum and average for certain pollutants and the source of information. Data for all pollutants in Group A, for all outfalls, must be submitted unless waived by the permitting authority. For all outfalls, data for pollutants in Group B should be reported only for pollutants which you believe will be present or are limited directly by an effluent limitations guideline or NSPS or indirectly through limitations on an indicator pollutant.

1. Pollutant	2. Maximum Daily Value *(include units)*	3. Average Daily Value *(include units)*	4. Source *(see instructions)*
None			

CONTINUED FROM THE FRONT	EPA ID Number *(copy from Item I of Form I)* 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
N/A	

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** Waste Stream Characterization Repotr #13

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
No known comparable facility	

EPA ID Number *(copy from item one of Form 1)*
NM0890010515

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.

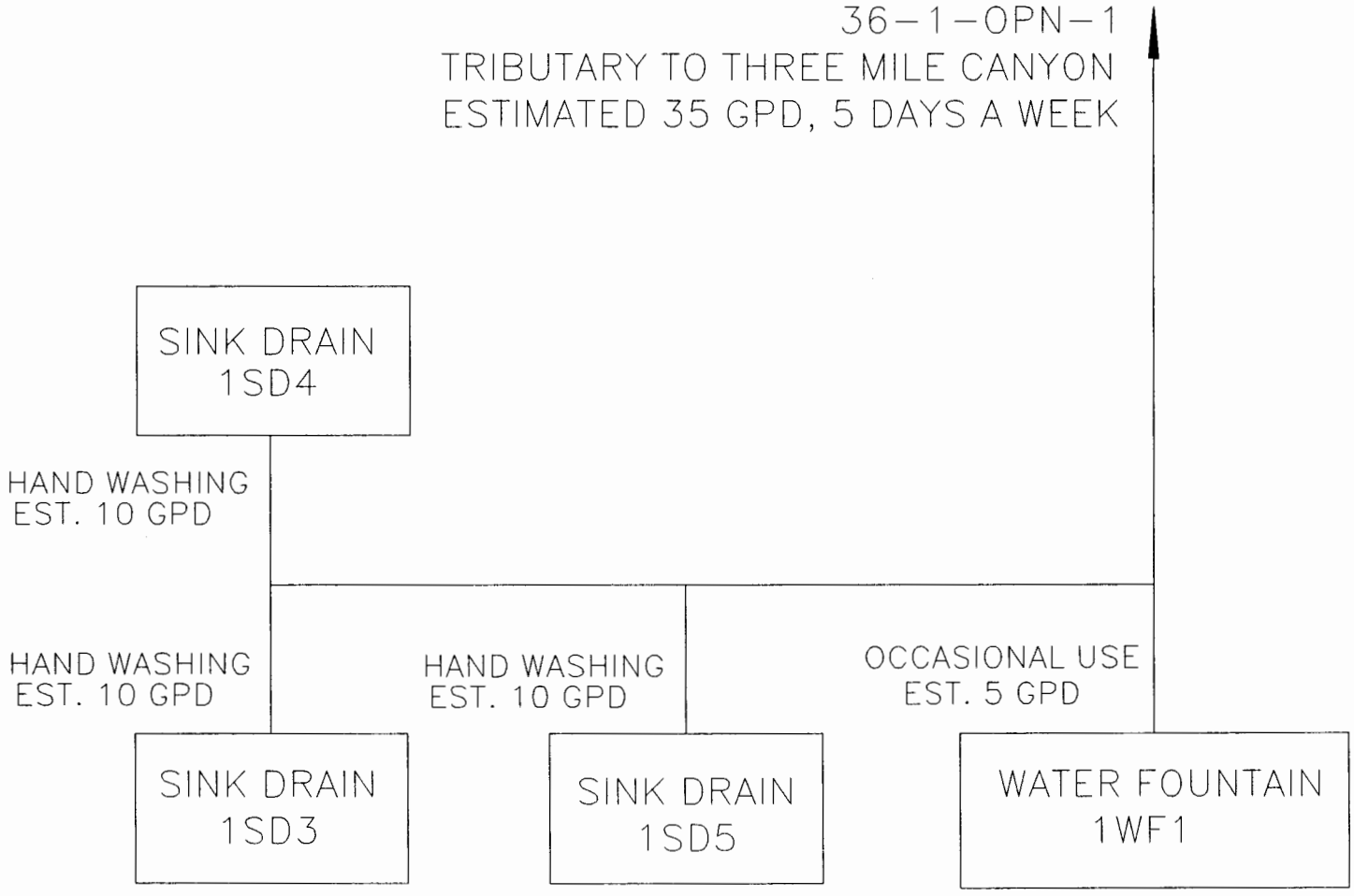
N/A

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)*	B. Phone No.
JOSEPH VOEZELLA, E, S, & H BRANCH CHIEF ALLEN J. TIEDMAN, ASSOC. DIRECTOR FOR OPERATIONS	505-667-5105 505-667-9390
C. Signature	D. Date Signed

*U.S. Government Printing Office : 1986 -491-191/52940



WATER FLOW SCHEMATIC

Please type or print in the unshaded areas only

EPA ID Number (copy from Item 1 of Form 1)
NM0890010515

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

Form 2D NPDES

EPA New Sources and New Dischargers Application for Permit to Discharge Process Wastewater

I. Outfall Location

For each outfall, list the latitude and longitude, and the name of the receiving water.

Outfall Number (list)	Latitude			Longitude			Receiving Water (name)
	Deg	Min	Sec	Deg	Min	Sec	
36-48-OPN-1	35	50	15	106	16	25	SEEPAGE PIT

II. Discharge Date (When do you expect to begin discharging?)

ACTIVE DISCHARGE OBSERVED DURING WASTE STREAM CHARACTERIZATION STUDY.

III. Flows, Sources of Pollution, and Treatment Technologies

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

Outfall Number	1. Operations Contributing Flow (list)	2. Average Flow (include units)	3. Treatment (Description or List Codes from Table 2D-1)
OPN-1	TA 36-48 Non-contact cooling water	2 GPM	None
	1 Sink drain	Flow is nil	None
	1 Cup drain	Flow is nil	None

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)*
OPN-1	2 hrs/day	2-3 D/yr	2 GPM	1080 GAL	1 yr

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)*

 CONTINUE ON NEXT PAGE

CONTINUED FROM THE FRONT	EPA ID Number *(copy from Item 1 of Form 1)* NM0890010515	Outfall Number 36-48-OPN-1

V. Effluent Characteristics

A, and B: These items require you to report estimated amounts *(both concentration and mass)* of the pollutants to be discharged from each of your outfalls. Each part of this item addresses a different set of pollutants and should be completed in accordance with the specific instructions for that part. Data for each outfall should be on a separate page. Attach additional sheets of paper if necessary.

General Instructions *(See table 2D-2 for Pollutants)*

Each part of this item requests you to provide an estimated daily maximum and average for certain pollutants and the source of information. Data for all pollutants in Group A, for all outfalls, must be submitted unless waived by the permitting authority. For all outfalls, data for pollutants in Group B should be reported only for pollutants which you believe will be present or are limited directly by an effluent limitations guideline or NSPS or indirectly through limitations on an indicator pollutant.

1. Pollutant	2. Maximum Daily Value *(include units)*	3. Average Daily Value *(include units)*	4. Source *(see instructions)*
See attached 04A data sheets			

CONTINUED FROM THE FRONT	EPA ID Number *(copy from Item 1 of Form 1)* 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 See Waste Stream Characterization Report 13

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

EPA ID Number *(copy from item one of Form 1)*
NM0890010515

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.

N/A

VIII. Certification

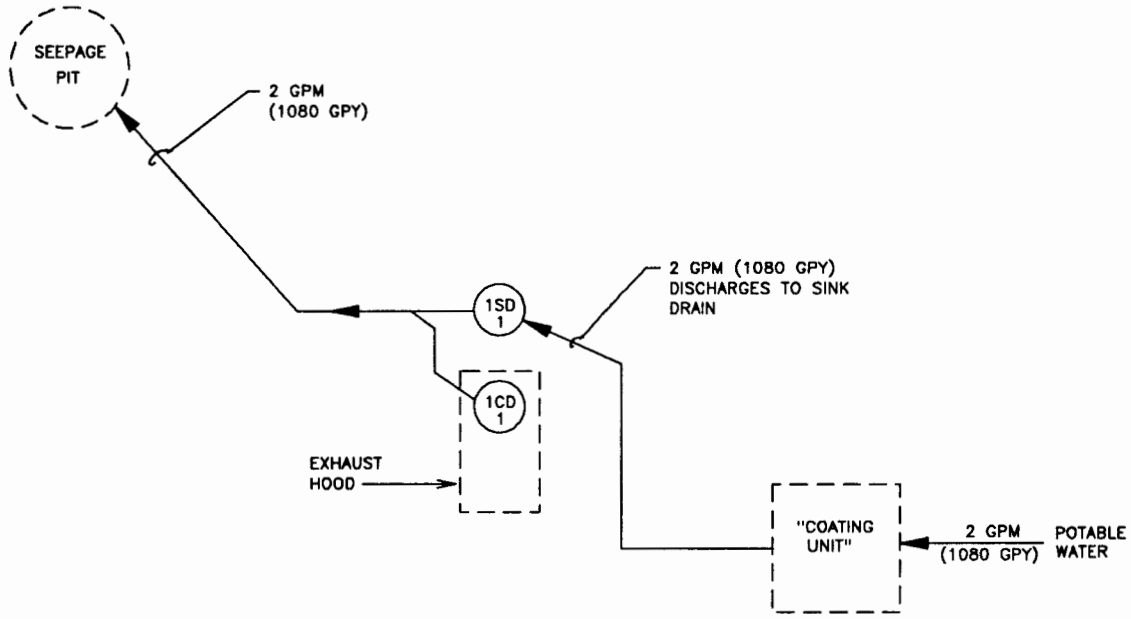
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage 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)*	B. Phone No.
JOSEPH VOEZELLA, E, S, & H BRANCH CHIEF	505-667-5105
ALLEN J. TIEDMAN, ASSOC. DIRECTOR FOR OPERATIONS	505-667-9390
C. Signature	D. Date Signed

*U.S. Government Printing Office : 1986 -491-191/52940

NOTE:

FLOW IS NIL FOR SINK DRAIN (SD) AND CUP DRAIN (CD)

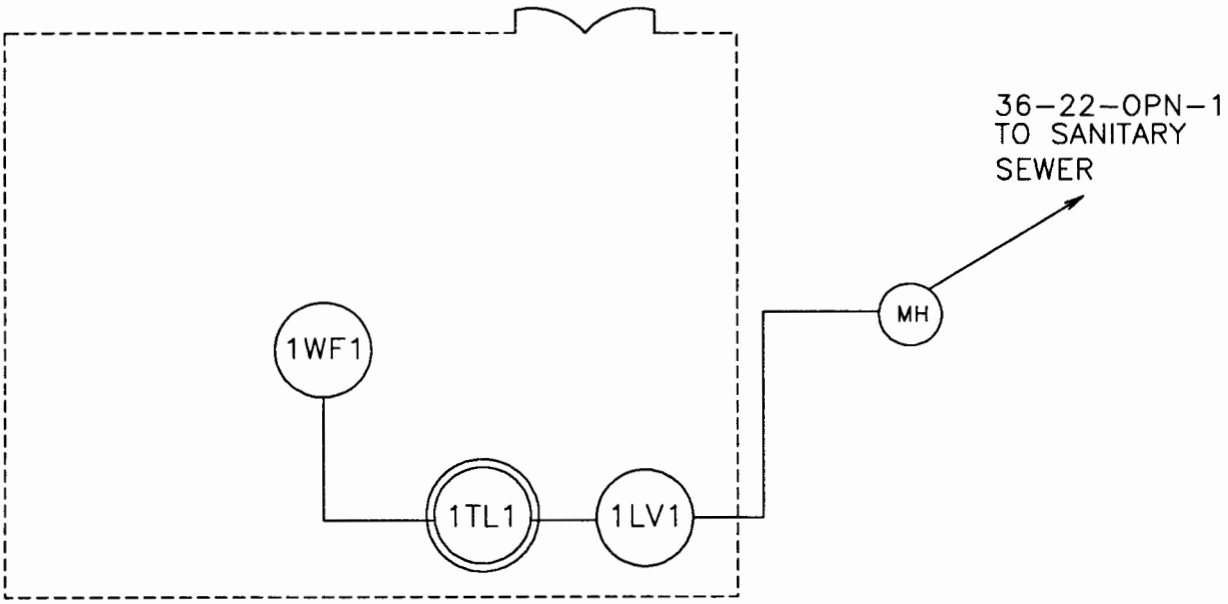


SCHEMATIC OF WATER FLOW

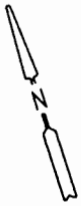
– NOT TO SCALE–

DYE STUDY INFORMATION

BUILDING NUMBER	DRAIN NUMBER	DID DYE REACH EXPECTED DESTINATION?	COMMENTS
36-1	1FD1	YES	06A106
	1FD2	YES	06A106
	1LV2	YES	01S VIA SWSC
	1SD2	YES	06A106
	1SD3	YES	UNPERMITTED (OPN-1)
	1SD5	YES	UNPERMITTED (OPN-1)
	1TL3	YES	01S VIA SWSC
	2ED2	YES	06A106
	2FD1	YES	01S VIA SWSC
	2FD2	YES	06A106
	2FD3	YES	06A106
	2SD1	YES	06A106
	2SD3	YES	06A106
	2TL2	YES	01S VIA SWSC
36-22	1TL1	YES	01S VIA SWSC
36-48	1SD1	YES	SEEPAGE PIT
36-81	1LV1	YES	01S VIA SWSC
36-84	1SD1	YES	01S VIA SWSC
	1TL1	YES	01S VIA SWSC

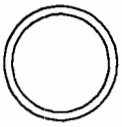


ACTUAL PIPING DETERMINED FROM DRAWING C-1154,
DYE STUDY VERIFICATION AND SITE INSPECTION



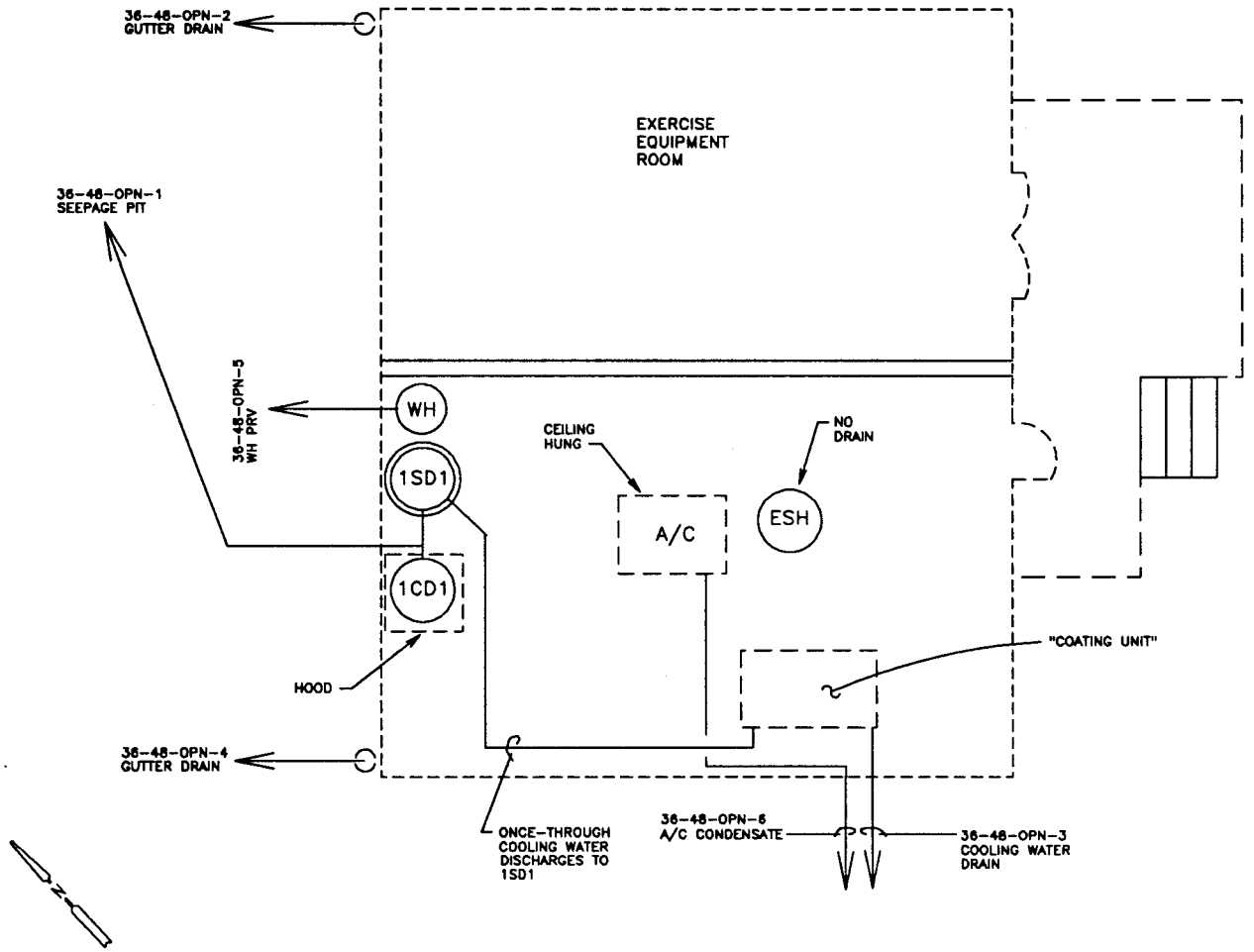
LEGEND

LV - LAVATORY
TL - TOILET
WF - WATER FOUNTAIN



DYE TESTED DRAIN

SANTA FE ENGINEERING, LTD.		
TA 36-22 BUILDING DRAIN SCHEMATIC	DRAWN	SJV
	DESIGN	SJV
	CHECKED	PEB
	DATE	9/1/92
SUBMITTED	RECOMMENDED	APPROVED
Los Alamos	Los Alamos National Laboratory Los Alamos, New Mexico 87545	SHEET / OF
CLASSIFICATION	REVIEWER	DATE
REQUESTING DIVISION / REQUESTING GROUP EM-8	LAB JOB NO. 11056-13	DRAWING NO. FIGURE 3 / REV.



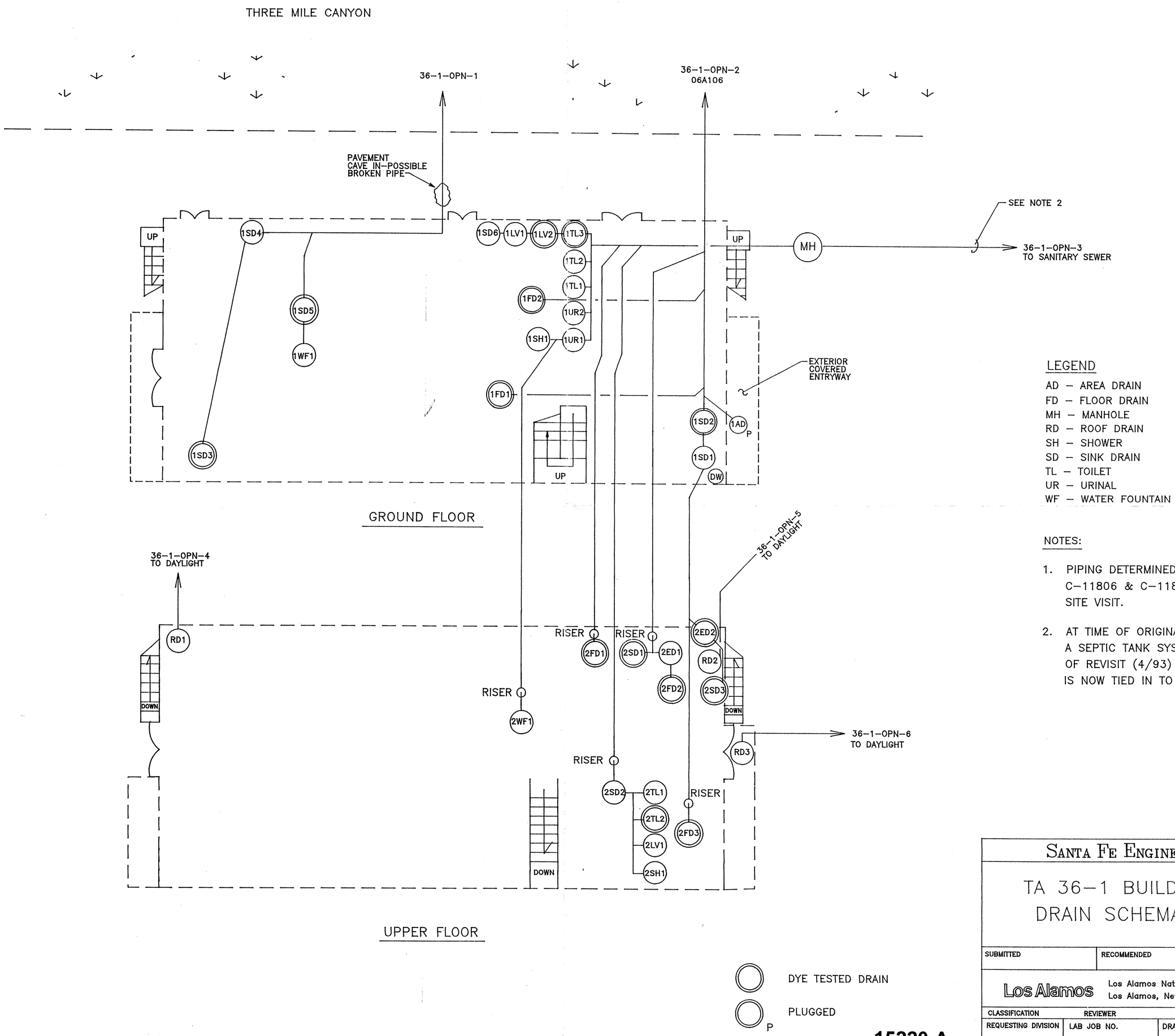
NOTE:

PIPING BASED ON DRAWINGS C-27660 & R-1957, DYE TESTING AND SITE VISIT

LEGEND

A/C	AIR CONDITIONING
CD	CUP DRAIN
ESH	EMERGENCY SHOWER
PRV	PRESS. RELIEF VALVE
SD	SINK DRAIN
WH	WATER HEATER
◯	DYE TESTED DRAIN

SANTA FE ENGINEERING, LTD.			
TA 36-48 BUILDING DRAIN SCHEMATIC		DRAWN	SJV
		DESIGN	SJV
		CHECKED	PEB
		DATE	9/2/92
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 EM-8	11056-13	FIGURE 4	



LEGEND

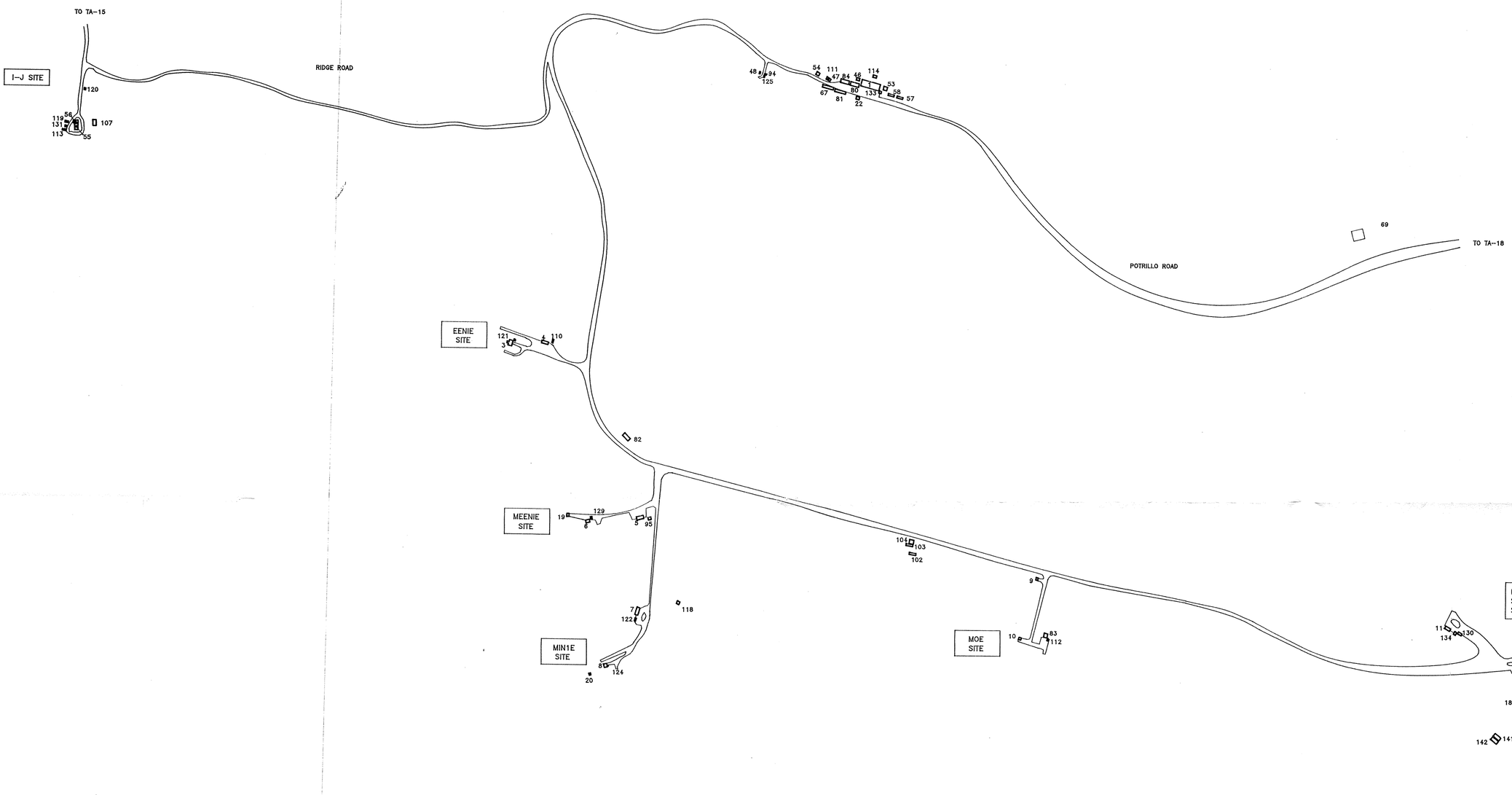
AD – AREA DRAIN
FD – FLOOR DRAIN
MH – MANHOLE
RD – ROOF DRAIN
SH – SHOWER
SD – SINK DRAIN
TL – TOILET
UR – URINAL
WF – WATER FOUNTAIN

NOTES:

1. PIPING DETERMINED FROM DRAWINGS C–11806 & C–11808, DYE STUDY AND SITE VISIT.
2. AT TIME OF ORIGINAL REPORT (9/2/92) A SEPTIC TANK SYSTEM WAS IN USE. AS OF REVISIT (4/93) THE SANITARY SYSTEM IS NOW TIED IN TO NEW SWSC AT TA–46.

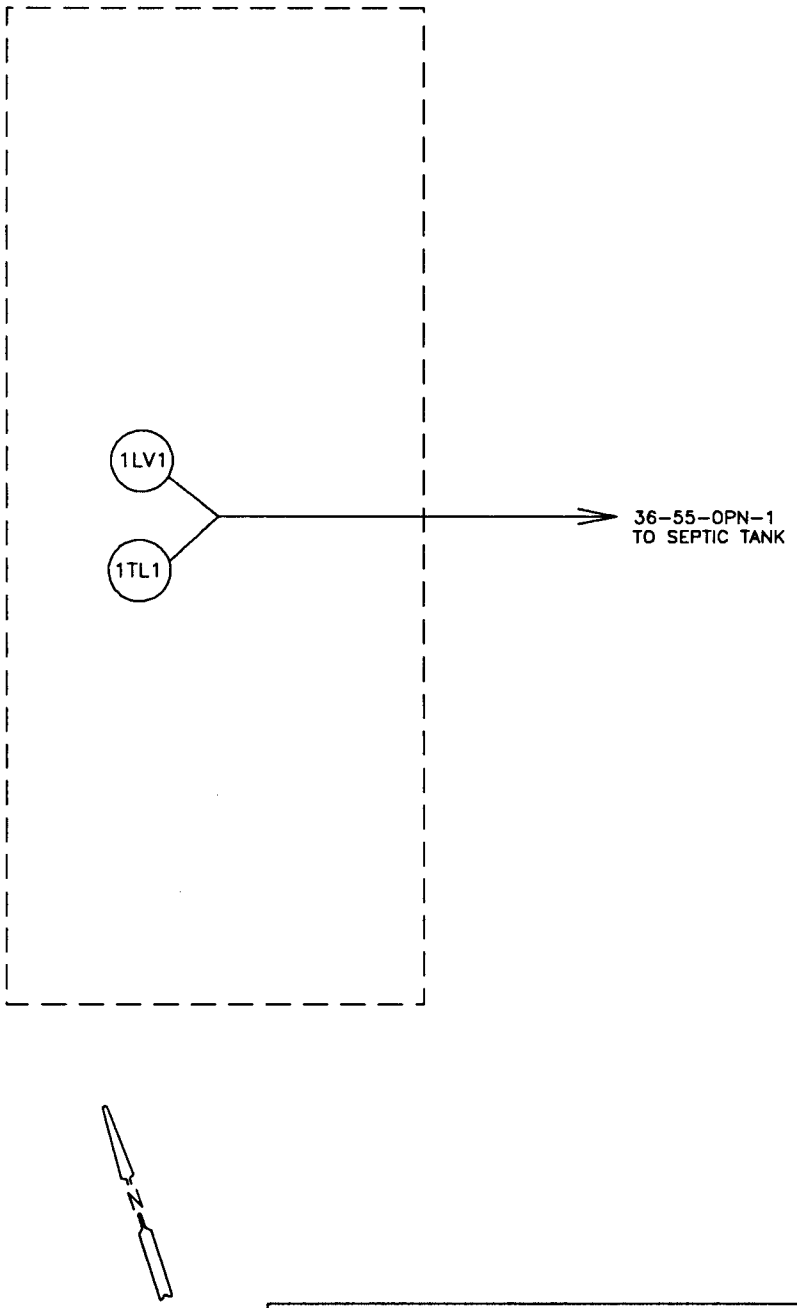
15220-A

SANTA FE ENGINEERING, LTD.		
TA 36–1 BUILDING DRAIN SCHEMATIC	DRAWN	SJV
	DESIGN	SJV
	CHECKED	PEB
	DATE	9/2/92
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 EM–8	11056–13	FIGURE 2



SANTA FE ENGINEERING, LTD.		
TA-36 PLOT PLAN	DRAWN	PEB
	DESIGN	PEB
	CHECKED	LBA
	DATE	9/8/92
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 / 11056-13 / FIGURE 1		

15220-B



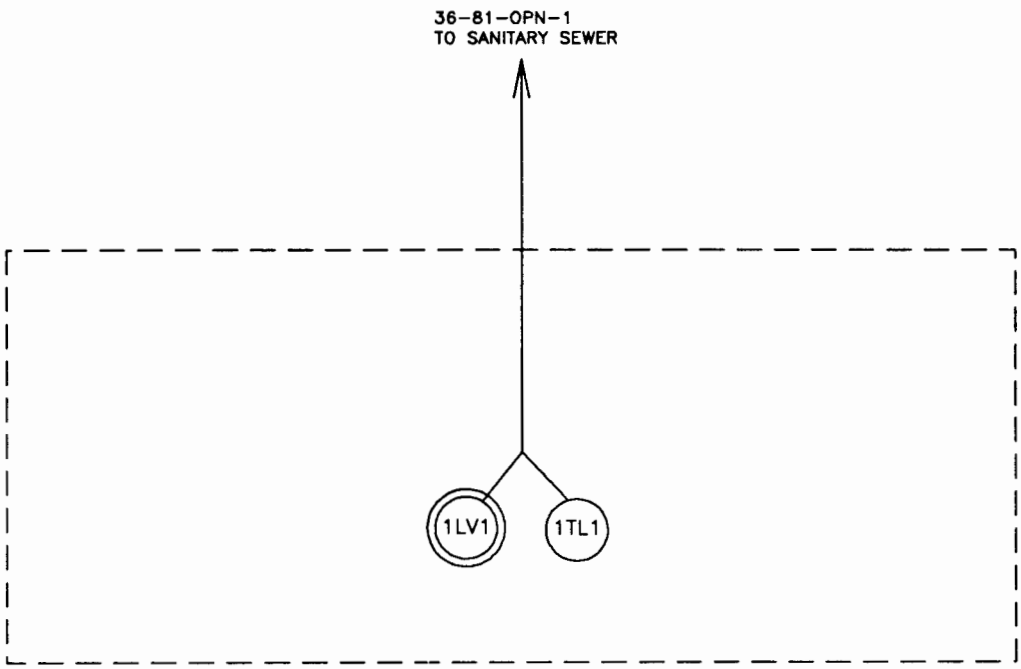
LEGEND

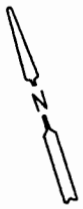
LV – LAVATORY

TL – TOILET

ACTUAL PIPING DETERMINED FROM SITE VISIT

SANTA FE ENGINEERING, LTD.			
TA 36-55 BUILDING DRAIN SCHEMATIC		DRAWN	SJV
		DESIGN	SJV
		CHECKED	PEB
		DATE	9/2/92
SUBMITTED	RECOMMENDED	APPROVED	
Los Alamos	Los Alamos National Laboratory Los Alamos, New Mexico 87545	SHEET	OF
CLASSIFICATION	REVIEWER	DATE	
REQUESTING DIVISION / REQUESTING GROUP EM-8	LAB JOB NO. 11056-13	DRAWING NO. FIGURE 5	REV.





LEGEND

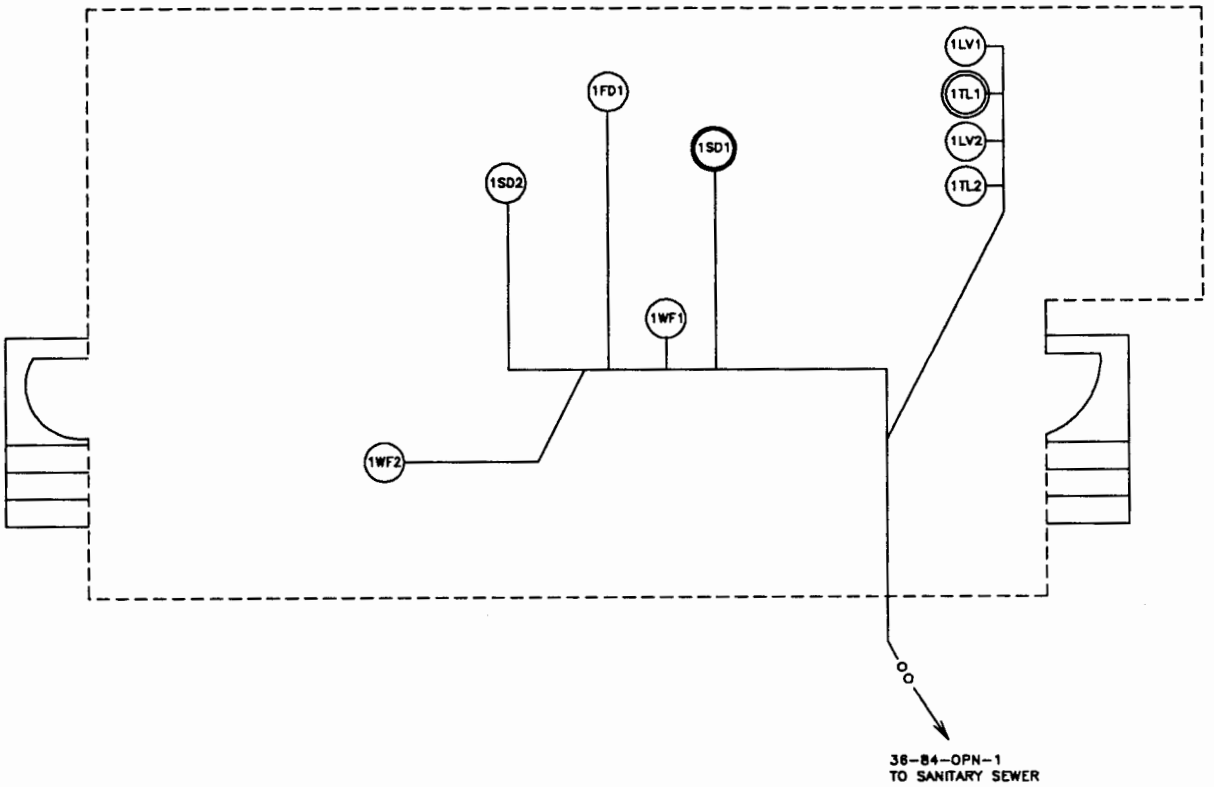
LV - LAVATORY

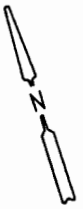
TL - TOILET

DYE TESTED DRAIN

ACTUAL PIPING DETERMINED FROM SITE VISIT

SANTA FE ENGINEERING, LTD.		
TA 36-81 BUILDING DRAIN SCHEMATIC	DRAWN	SJV
	DESIGN	SJV
	CHECKED	PEB
	DATE	9/2/92
SUBMITTED	RECOMMENDED	APPROVED
Los Alamos — Los Alamos National Laboratory, Los Alamos, New Mexico 87545	SHEET	OF
CLASSIFICATION	REVIEWER	DATE
REQUESTING DIVISION / REQUESTING GROUP EM-8	LAB JOB NO. 11056-13	DRAWING NO. FIGURE 6 / REV.





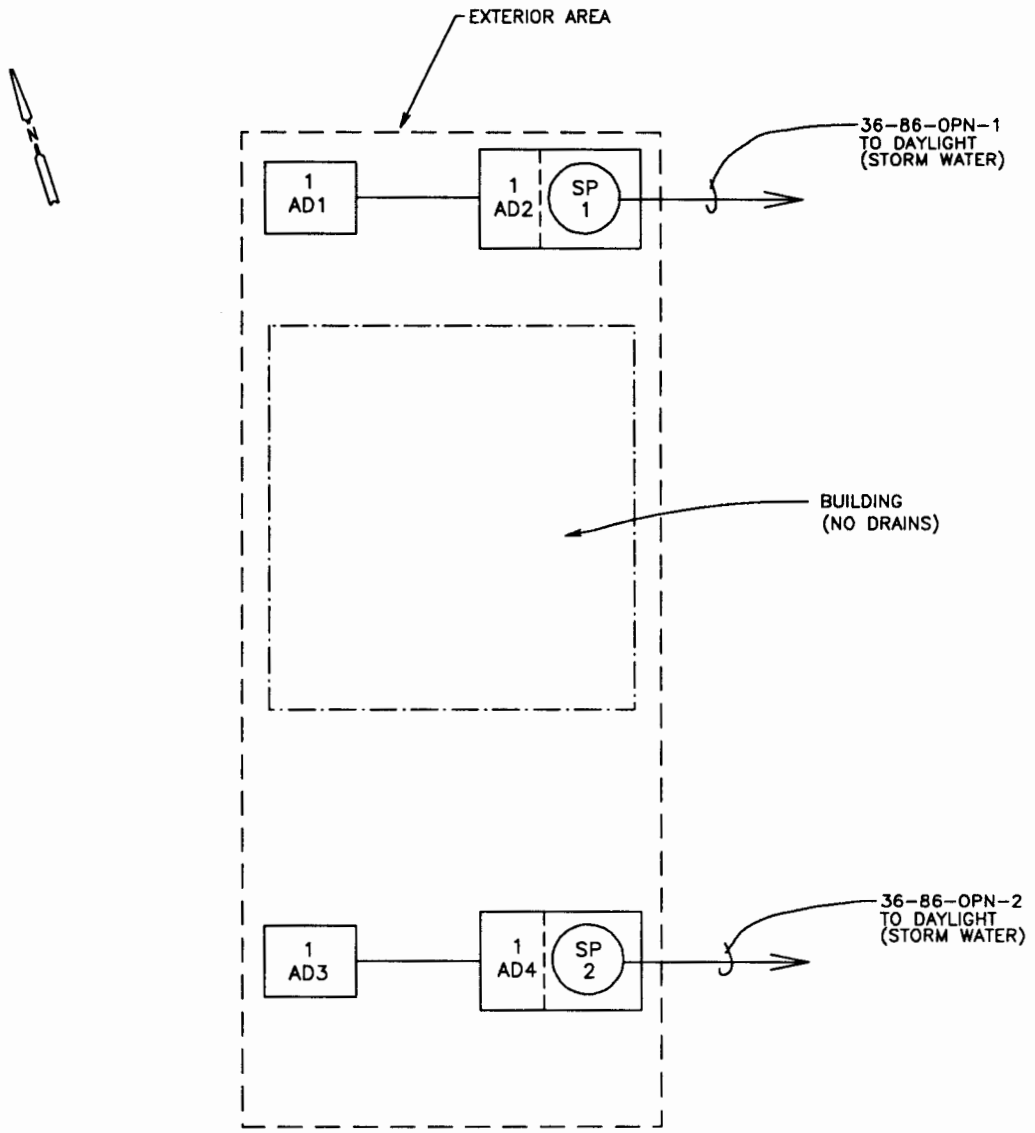
LEGEND

FD – FLOOR DRAIN
LV – LAVATORY
SD – SINK DRAIN
TL – TOILET
UR – URINAL
WF WATER FOUNTAIN

○ – DYE TESTED DRAIN

ACTUAL PIPING DETERMINED FROM ENGINEER DRAWINGS R-7063 AND C045340, DYE STUDY VERIFICATION, AND SITE INSPECTION

SANTA FE ENGINEERING, LTD.		
TA 36-84 BUILDING DRAIN SCHEMATIC	DRAWN	SJV
	DESIGN	SJV
	CHECKED	PEB
	DATE	9/2/92
SUBMITTED	RECOMMENDED	APPROVED
Los Alamos — Los Alamos National Laboratory, Los Alamos, New Mexico 87545	SHEET	OF
CLASSIFICATION	REVIEWER	DATE
REQUESTING DIVISION / REQUESTING GROUP EM-8	LAB JOB NO. 11056-13	DRAWING NO. FIGURE 7 / REV.

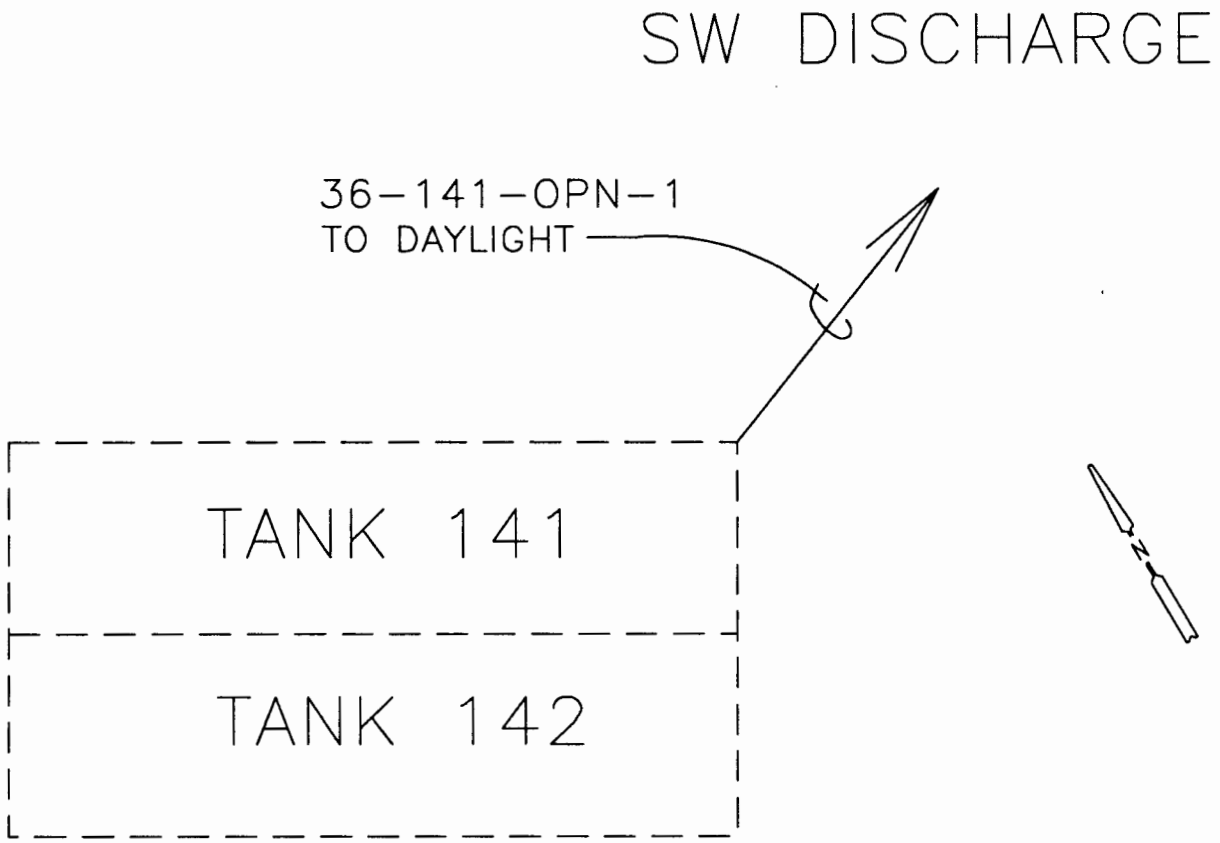


LEGEND

AD – AREA DRAIN
SP – SUMP

PIPING DETERMINED FROM SITE VISIT

SANTA FE ENGINEERING, LTD.		
TA 36-86 BUILDING DRAIN SCHEMATIC	DRAWN	SJV
	DESIGN	SJV
	CHECKED	PEB
	DATE	9/2/92
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 EM-8	11056-13	FIGURE 8



SECONDARY CONTAINMENT FOR OIL TANKS

SANTA FE ENGINEERING, LTD.		
TA 36-141 & 142 SCHEMATIC	DRAWN	SJV
	DESIGN	SJV
	CHECKED	PEB
	DATE	9/2/92
SUBMITTED	RECOMMENDED	APPROVED
Los Alamos — Los Alamos National Laboratory, Los Alamos, New Mexico 87545	SHEET	OF
CLASSIFICATION	REVIEWER	DATE
REQUESTING DIVISION / REQUESTING GROUP EM-8	LAB JOB NO. 11056-13	DRAWING NO. FIGURE 9 / REV.