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FINAL SOLVENT USAGE REVIEW FOR BUILDINGS DISCHARGEING TO THE LAND
APPLICATION SYSTEMNSB KINGS BAY GA
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ABB ENVIRONMENTAL SERVICES, INC

FINAL

**SOLVENT USAGE REVIEW FOR
BUILDINGS DISCHARGING TO THE
LAND APPLICATION SYSTEM**

**NAVAL SUBMARINE BASE
KINGS BAY, GEORGIA**

Contract No. N62467-89-D-0317

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EXECUTIVE SUMMARY

This report was prepared in conjunction with the solvent exclusion study completed at Naval Submarine Base (NSB) Kings Bay, Georgia. The solvent exclusion study was performed under contract to Southern Division Naval Facilities Engineering Command to assess the applicability of the solvent exclusion provision codified at 40CFR 261.3(a)(2)(iv). This solvent exclusion provision may be applied only to those waste streams that discharge to wastewater treatment facilities holding National Pollutant Discharge Elimination System (NPDES) permits under the Clean Water Act. Therefore, only those waste streams that discharge to the Industrial Waste Treatment Facility or the Waterfront Wastewater Treatment Plant are eligible to apply for exclusion. Wastewaters discharging to the Land Application System (LAS), which is not NPDES-permitted, are not eligible for the exclusion.

Wastewater treatment facilities that treat wastewater containing Resource Conservation and Recovery Act (RCRA) -listed hazardous wastes must be RCRA-permitted facilities. An exception to the RCRA regulations is the solvent exclusion provision (40CFR 261.3(a)(2)(iv)), which allows the treatment of these waste streams based upon the quantity of certain constituents in the waste stream. The exclusion provision defines subparagraph A and B constituents and provides a calculation that considers the potential concentration of these constituents in the discharge to the headworks of the wastewater treatment facility. If generators can demonstrate that the result of this calculation is lower than the thresholds established for the subparagraph A and B constituents, the wastewater treatment facility is not required to obtain RCRA permits for treatment of the waste streams.

To perform the solvent exclusion determination at NSB Kings Bay, operations that involve the use of the subparagraph A or B solvents were observed, and buildings that have floor drains that discharge to the wastewater treatment facilities were visited. In cases where the solvents of concern were handled near a floor drain that discharges to a wastewater treatment facility, information was collected for the solvent exclusion determination.

The waste streams that discharge to the LAS are not eligible for application of the solvent exclusion provision because it is not an NPDES permitted process. However, several of these waste streams were addressed because of the observed potential for discharge of the solvents of concern to a floor drain in the work area. Although there is no reason to believe that any of the solvents of concern are actually discharged to the LAS, no practices or procedures were noted in three of the observed operations that would preclude such a discharge. It is recommended that the personnel involved in any of the three operations be trained to prevent releases to the system. One operation involves the storage and handling of a solvent of concern near a drain that discharges to the LAS; it is recommended in this case that a containment system be employed to prevent accidental release to the drain.

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GLOSSARY OF ACRONYMS AND ABBREVIATIONS

ABB-ES	ABB Environmental Services, Inc.
BOD ₅	Five-day Biochemical Oxygen Demand
IWTF	Industrial Waste Treatment Facility
LAS	Land Application System
MGD	Million Gallons per Day
NSB	Naval Submarine Base
NPDES	National Pollutant Discharge Elimination System
RCRA	Resource Conservation and Recovery Act
SAA	Satellite Accumulation Area
SOP	Standard Operating Procedure
SUBASE	Submarine Base
SWFLANT	Strategic Weapons Facility, Atlantic
TRF	Trident Refit Facility
WFWWTP	Waterfront Wastewater Treatment Plant
WWTF	Wastewater Treatment Facility

1.0 INTRODUCTION

This report has been prepared as part of the Resource Conservation and Recovery Act (RCRA) solvent exclusion determination, completed by ABB Environmental Services (ABB-ES) for Naval Submarine Base (NSB) Kings Bay, Georgia. The solvent exclusion determination report documents the eligibility for an exclusion, under 40CFR 261.3(a)(2)(iv), of the waste streams that discharge to the Industrial Waste Treatment Facility (IWTF) and the Waterfront Wastewater Treatment Plant (WFWWTP) at NSB Kings Bay. These two treatment facilities hold a National Pollutant Discharge Elimination System (NPDES) permit; therefore, the waste streams that discharge to them are eligible for application of the exclusion. Although the waste streams that discharge to the Land Application System (LAS) are not eligible for the exclusion provision, ABB-ES was requested to prepare this report to assist NSB Kings Bay in minimizing the potential for solvent discharge to the LAS.

Under RCRA, any treatment of a listed or characteristic hazardous waste must be performed by a RCRA-permitted treatment facility. The mixture rule, as codified in 40CFR 261.3(a)(2)(iv), states that dilution of a hazardous waste with a non-hazardous waste results in the entire mixture being a hazardous waste. Therefore, the discharge of any listed or characteristic wastes to a facility could require that the facility hold a RCRA permit to be able to treat the wastewater.

While performing the solvent exclusion determination at NSB Kings Bay, operations that involve the use of subparagraph A or B solvents in the vicinity of a floor drain were observed. For cases in which the floor drain discharged to the LAS, no calculations for estimating the concentration of subparagraph A and B solvents were performed, because the solvent exclusion provision does not apply to the LAS. The LAS is permitted to receive only sanitary waste; any type of industrial waste in the influent is prohibited by the terms of the current land application permit. Three operations were observed during the study in which the potential is believed to exist for the discharge of subparagraph A or B solvents to the LAS. At the request of the engineer-in-charge, these operations are presented in this report with recommendations for prevention of the discharge. It should be noted that the scope of the solvent exclusion study was limited to subparagraph A and B solvents, but no hazardous or industrial wastes may be discharged to the LAS.

A description of the LAS, including its flow characteristics, is provided in Section 2.0. Section 3.0 summarizes the three operations in question and makes recommendations for prevention of the potential discharge. Worksheets for buildings that discharge to the LAS are included in the Appendix. For buildings that could potentially discharge solvents to the LAS, the worksheets provide descriptions of current weekly solvent usage in tabular form.

2.0 LAND APPLICATION SYSTEM

The discharges to the LAS at NSB Kings Bay are shown in Figure 2-1. These WWTFs are used for sanitary and process wastewater on the base. The three facilities are the Base Area Wastewater Treatment Plant (commonly referred to as the LAS), the IWTF, and the WFWWTP.

The LAS provides advanced treatment for sanitary waste generated in the family housing, personnel, and industrial support areas through a combination of biological and land treatment processes. The LAS also receives wastewater from the Trident Refit Facilities (TRFs), the base Childcare facilities, and the Camden County school buildings. Because the LAS is not NPDES-permitted, its wastewater is not eligible for a solvent exclusion determination. Any listed spent solvent, or any other form of industrial waste, discharged to the LAS would be a violation of the permit conditions.

Wastewater treatment at the LAS consists of screening, grit removal, biological treatment, filtration, and chlorination. The treatment capacity is 1.5 million gallons per day (MGD) and the facility can sustain a hydraulic peak of 7 MGD through the headworks. Digestion of organic wastes occurs in an aerobic facultative lagoon that produces an effluent with less than 30 milligrams per liter of both BOD₅ and suspended solids after filtration. This effluent is sprayed on the base woodlands and recreation areas under the Georgia Land Application System permit (Permit No. GA03-751) held by NSB Kings Bay.

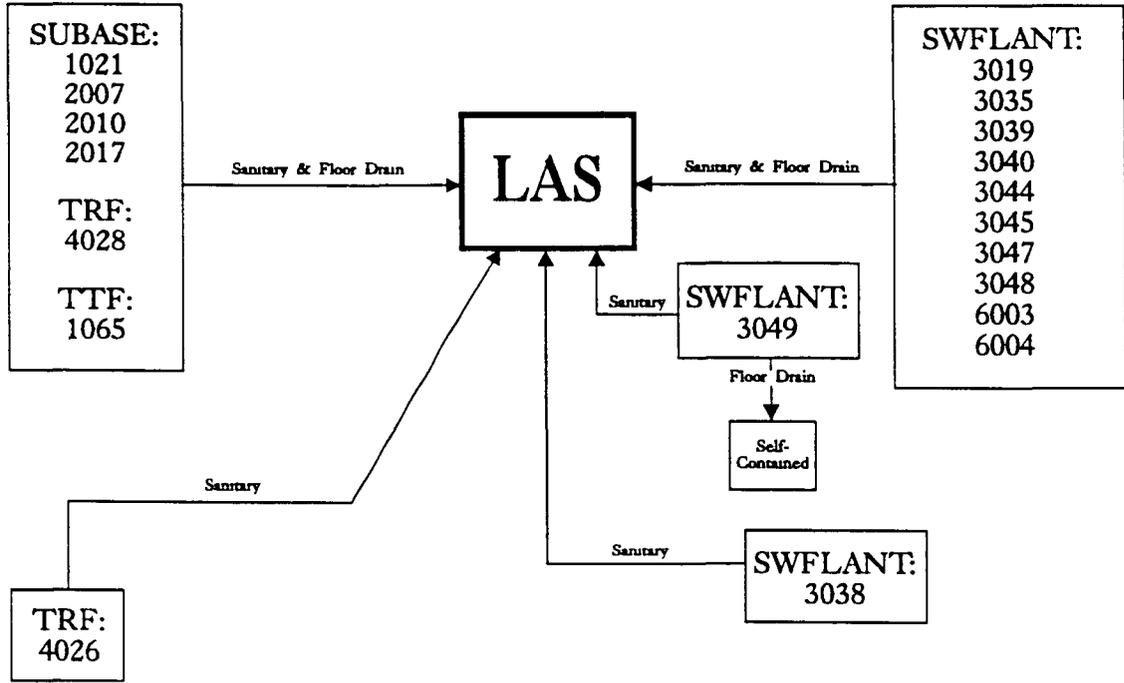


Figure 2-1: Shops that Discharge to the Land Application System



LAS Solvent Usage Review

NSB Kings Bay
Kings Bay, GA

3.0 SUMMARY AND RECOMMENDATIONS

Wastewater reaching the LAS is not eligible for consideration of the solvent exclusion determination because the LAS is not an NPDES-permitted facility. The LAS may not receive subparagraph A and B spent solvents, or any other type of industrial waste.

The scope of the solvent exclusion determination performed by ABB-ES is limited to assessment of the potential for subparagraph A and B solvents to be present in the influent of the facility's WWTFs. Solvent usage was examined in buildings that discharge to the WFWWTP, the IWTF, and the LAS. During this study, three operations were noted where the potential exists for discharge of spent solvents to the LAS. To minimize this potential, base personnel should implement procedures that apply during the use of the solvents. The three buildings of concern are: 4028 (Tenant Command: TRF); 6004 (Tenant Command: Strategic Weapons Facility, Atlantic [SWFLANT]); and 2007 (Tenant Command: Submarine Base [SUBASE]).

Building 4028, the Command and Control Systems Building, houses several shops in which personnel handle Toolmaker's Ink Remover, made up of 70% toluene and 30% methyl ethyl ketone (both subparagraph B); Lacquer Thinner, which contains 12% toluene and 12% methyl ethyl ketone (both subparagraph B); and a cleaning compound, which is 5% tetra-chloroethylene (subparagraph A) and 25% methylene chloride (subparagraph B). The estimated weekly usage of these solvents is presented in Table 3-1.

Although personnel interviewed during the site visit appeared to be familiar with the proper handling of these solvents, no practices or procedures were noted by ABB-ES personnel that would preclude the discharge of the solvents to the sewer system. The solvents were typically applied with rags for cleaning of surfaces prior to welding, painting, etc. The likelihood of discharge of any of these solvents is small; but the potential exists. The recommendation for addressing this potential is adequate training in the use of all solvents and other materials such that discharge to floor drains is precluded. Personnel should also be fully aware that the treatment facility, which receives wastewater from the building, is permitted to treat sanitary wastewater *only*. Training should emphasize that any kind of industrial waste, no matter what the concentration, is prohibited from reaching the LAS. As an added contingency, the facility could consider permanently sealing the floor drains in areas where solvents or other potential industrial wastes are used. This option should not be considered if it is in violation of any building codes.

Building 6004, the Technical Services Building, houses a calibration laboratory in which freon (a chlorofluorocarbon — subparagraph B) is handled in five-gallon cans. The cans are stored near a floor drain that discharges to the LAS. The freon is transferred from the five-gallon cans to glass beakers in the storage area. The beakers are then placed under a laboratory hood where the freon is used. No practices or procedures were observed by ABB-ES personnel during the site visit that would preclude the accidental release of freon to the drain during the transfer process. Therefore, it is recommended that a containment system be installed for storage of the cans and transfer operations. The transfer operation

presents the greatest potential for release of the freon. Although this potential risk could be adequately addressed by performing all transfers under the laboratory hood, it is instead recommended that the cans be stored in a containment system to prevent releases during other unforeseen events.

Building 2007, the Transportation Shop, houses a variety of operations that provide repair and maintenance services for base vehicles. A brake cleaner is used in these operations that contains 30 to 70% tetrachloroethylene (subparagraph A) and 30 to 70% 1,1,1-trichloroethane (subparagraph B). The brake cleaner is atomized as it is applied to the vehicle brakes, minimizing the potential for discharge of a liquid to the floor drains in the area. It was noted during the site visit, however, that no practices or procedures are in place that would preclude the discharge of the brake cleaner to the floor drains. The estimated weekly usage of the brake cleaner is presented in Table 3-1.

Because the brake cleaner is used in a large area (which would be difficult to fully contain) it is recommended that all personnel involved in the use of the solvent be trained to minimize the use of the cleaner and to prevent discharge of excess cleaner to the nearby floor drains. A final contingency measure could be permanently sealing the floor drains in areas where solvents or other potential industrial wastes are used. No obvious need for the drain was noted during the site visit. This option should not be considered if it violates any building codes.

**Table 3-1
Potential Discharge to LAS**

TENANT COMMAND	BUILDING #	Estimated Solvent Usage (gallons/week)	
		Subparagraph A	Subparagraph B
SUBASE	2007	1.0	1.0
TRF	4028	0.01	0.14
SWFLANT	6004	0	0.31
TOTALS		1.0	1.5

Table 3-2
Wastewater Treatment Facility Flowrate Information¹

Month/Year	Influent/Effluent Data (x 1,000 gallons)					
	Total Influent	Total Effluent	Average Daily Influent	Average Daily Effluent	7-Day Average Influent	7-Day Average Effluent
9/91	19,993	20,769	666	692	4,662	4,844
10/91	21,100	N/A ²	681	N/A ²	4,767	N/A ²
11/91	16,889	15,486	563	516	3,941	3,612
12/91	16,779	17,227	541	556	3,787	3,892
1/92	18,707	13,778	603	445	4,221	3,115
2/92	19,535	19,399	673	668	4,711	4,676
3/92	19,853	24,968	640	805	4,480	5,635
4/92	20,208	21,566	674	719	4,718	5,033
5/92	19,669	16,150	634	521	4,438	3,647
6/92	22,182	20,842	739	695	5,173	4,865
7/92	22,073	27,364	712	883	4,984	6,181
8/92	22,420	11,322	723	365	5,061	2,555
AVERAGES	19,951	18,988	654	624	4,579	4,369

¹Based on 1991 - 1992 facility-maintained flow data

²Effluent data were not kept for this month

APPENDIX A

Solvent Usage Worksheets

**BUILDINGS THAT DISCHARGE TO THE
LAND APPLICATION SYSTEM**

<u>Tenant Command</u>	<u>Building Number</u>	<u>Building Description</u>
SUBASE	1021	Auto Hobby Shop
	2007	Transportation Shop
	2010	Public Works Maintenance Building
	2017	Pesticide Control Shop
TRF	4026	Industrial Processes Building
	4028	Command and Control Systems
TTF	1065	Trident Training Facility
SWFLANT	3019	Maintenance Support Building
	3035	Motor Transfer Facility
	3038	Inert Components and Control Building
	3039/3040	Missile Assembly Buildings
	3044	Radiation Inspection Building
	3045	Motor Inspection Building
	3047/3048	Vertical Missile Packaging Buildings
	3049	Re-Entry Body Complex
	6003	Strategic Weapons Systems Support Warehouse
6004	Technical Services Building	

TENANT COMMAND : SUBBASE BUILDING 2007 : Transportation Shop

Description of Operations:

The Transportation Shop performs preventive maintenance on government vehicles and industrial equipment. Shop operations include: oil changes, transmission servicing, brake servicing, corrosion control, and painting.

Discharge to WWTFs:

There are floor drains in the heavy equipment area that discharge to an oil-water separator and then to the LAS. The sanitary sewer system discharges to the LAS.

Solvent Usage:

Lacquer thinner (12% toluene and 12% methyl ethyl ketone) is used for cleaning parts. The lacquer thinner is stored in a 55-gallon drum in a room adjacent to the Paint and Body Shop and transferred into a bucket for use as a cleaner/degreaser. Parts are dipped in the bucket, air dried, and taken into the Paint and Body Shop for maintenance and repair operations. There are no floor drains in the room where the lacquer thinner is used, and the nearest floor drain is in the restroom next door. The drum of lacquer thinner is replaced approximately every 8 weeks, and the used drum is disposed by the hazardous waste contractor.

Brake cleaner containing 30-70% tetrachloroethylene and 30-70% 1,1,1-trichloroethane is used in an atomizer and sprayed on brakes in the equipment shops. Personnel interviewed estimated that approximately 6 gallons per month of the brake cleaner is used, or approximately 1.5 gallons per week. There are floor drains in the areas where this brake cleaner is sprayed and although there is no reason to believe the cleaner is discharged to these drains, no Standard Operating Procedures (SOPs) were observed that would prevent this discharge.

Summary of Solvent Usage:

SOLVENT NAME	Weekly Use (gal)	Potential for Discharge
Tetrachloroethylene (A)	1.0	YES
1,1,1-Trichloroethane (B)	1.0	YES
Toluene (B)	0.8	NO
Methyl Ethyl Ketone (B)	0.8	NO

Assumptions:

It is assumed that the lacquer thinner is not charged to the floor drain in the restroom as part of the standard operations.

Because of the presence of floor drains in some areas, there is the potential for discharge of brake cleaner to the LAS.

TENANT COMMAND : SUBASE BUILDING 2010 : Public Works Maintenance Building

Description of Operations:

The Public Works Maintenance Building houses a variety of shops including the Public Works Paint Shop, the Electronics Shop, the Welding Shop, the PM Shop, the Custodial Shop, the Appliance Shop, Housing Services, the Carpentry Shop, Yard Services, and the Roads and Grounds Shop. The majority of the work performed by personnel from this building is performed elsewhere on the base.

Discharge to WWTFs:

The floor drains and sanitary sewer system in this building discharge to the LAS.

Solvent Usage:

Approximately 12 aerosol cans (15 ounces each) of freon are estimated to be used each year in the electronics shop. Because this material is used in aerosol form, and in such small quantities, it is assumed that none of it is discharged to the LAS.

Approximately one pint (16 ounces) of a cleaner containing methyl ethyl ketone is used in the Work Request Shop each month, but there are no floor drains in this area.

The Paint Shop uses lacquer thinner (12% toluene and 12% methyl ethyl ketone) in 55-gallon drums outside of the building in the Satellite Accumulation Area (SAA). There are no floor drains in the area and personnel reported that during normal operations the lacquer thinner is maintained in the drums and other containers.

Assumptions:

It is assumed that the entire 55-gallon drum of lacquer thinner would be the largest quantity used in a week (no estimate was given by the personnel interviewed). Because there are no floor drains in the area, it is also assumed that there is no discharge of toluene or methyl ethyl ketone to the LAS.

No discharge of freon to the LAS is anticipated because it is used in small quantities and in aerosol form.

TENANT COMMAND : SUBASE BUILDING 2017 : Pesticide Control Shop

Description of Operations:

Personnel in the Pesticide Control Shop provide continuous pest control to all base commands by spraying and treating buildings. Pesticides are stored and mixed at this building.

Discharge to WWTFs:

The floor drains and sanitary sewer system in this building discharge to the LAS.

Solvent Usage:

None of the solvents of concern are used in this building.

TENANT COMMAND : TRF

BUILDING 4028 : Command and Control Systems

(Page 1 of 2)

Description of Operations:

The Command and Control Systems building houses a variety of shops that provide services including: cleaning of oxygen, nitrogen, and high pressure air system parts; maintenance and repair of electronic and optical systems, and electronic command and control components aboard submarines; and calibration of all pressure gauges, torque wrenches, and other calibrated submarine equipment.

Discharge to WWTFs:

The floor drains and sanitary sewer system in this building discharge to the LAS.

Solvent Usage:

One 15-ounce can of aerosol 1,1,1-trichloroethane was seen in Shop 67 but personnel interviewed reported that it had not been used at any time.

Approximately 4 gallons per year of lacquer thinner (12% toluene and 12% methyl ethyl ketone) are used in Shop 35A.

One quart of Toolmaker's Ink Remover (70% toluene and 30% methyl ethyl ketone) is used in Shop 51C.

One 3-gallon can of freon was seen to be stored in Shop 67, but according to personnel interviewed, it is not used in their operations. They have requested that it be disposed of by the hazardous waste contractor.

A cleaning compound containing 5% tetrachloroethylene and 25% methylene chloride is used at a rate of 3 gallons per year in Shops 35A and 135.

Summary of Solvent Usage:

SOLVENT NAME	Weekly Usage (gal)	Potential for Discharge
Methylene Chloride (A)	0.01	YES
Tetrachloroethylene (A)	0.003	YES
1,1,1-Trichloroethane (B)	< 0.12	YES
Toluene (B)	0.01	YES
Freon (B)	3.0	NO
Methyl Ethyl Ketone (B)	0.01	YES

TENANT COMMAND : TRF
BUILDING 4028 : Command and Control Systems

(Page 2 of 2)

Assumptions:

No discharge of 1,1,1-Trichloroethane to the LAS is anticipated because it is used in small quantities and in aerosol form.

Freon is not used in operations and the 3-gallon can observed during the site visit is reported by personnel to be scheduled for disposal by the hazardous waste contractor.

Because there are floor drains in the shops where the solvents of concern are handled, there exists the potential for discharge to the LAS.

TENANT COMMAND : TTF BUILDING 1065 : Trident Training Facility

Description of Operations:

The Trident Training Facility (TTF) provides training to Navy personnel on weapons, navigation, combat systems, and engineering operations of the Trident submarine. The engineering department trains personnel in the use and maintenance of the Trident mechanical systems.

The facility management office oversees general maintenance activities conducted throughout the facility.

Discharge to WWTFs:

The floor drains and sanitary sewer system in this building discharge to the LAS.

Solvent Usage:

1,1,1-Trichloroethane and freon were reported to be used in this building by the personnel interviewed. No discharge of these solvents to the LAS is expected because they are used in small quantities and in aerosol form.

Assumptions:

No discharge of 1,1,1-trichloroethane or freon is expected because they are used in small quantities and in aerosol form.

TENANT COMMAND : SWFLANT BUILDING 3019 : Maintenance Support Building

Description of Operations:

Personnel in the Maintenance Support Building (MSB) perform preventive maintenance, equipment repair, and equipment painting operations on Trident missile support equipment including missile containers, specialized missile handling apparatus, and missile transport equipment. Shop operations include touch-up brush painting, grinding, and abrasive blasting with glass beads in a glove box.

Preventive Maintenance Operations: These operations include various cleaning and light maintenance activities performed at specified intervals on each piece of Trident missile support equipment.

Equipment Repair Operations: These operations are unique processes that are performed on an "as needed" basis when missile support equipment is not functioning properly.

Equipment Painting Operations: Chemical paint removers and mechanical means are used to prepare surfaces for painting. The painting cleanup process requires the use of various solvents to remove residual paints from painting equipment. The resulting paint-contaminated solvents are collected in a storage container and handled by the hazardous waste contractor.

Discharge to WWTFs:

The floor drains and sanitary sewer system in this building discharge to the LAS. Several floor drains were noted in Shops 401 and 402.

Solvent Usage:

According to personnel interviewed, approximately 12 aerosol cans (15 ounces each) of 1,1,1-trichloroethane are used each month. Because the quantity is small and the material is used in aerosol form, no discharge to the LAS is anticipated.

Approximately 5 gallons of toluene every 2 months and 1 pint of methyl ethyl ketone every 6 months are estimated by personnel to be used in this building. There are no floor drains in the area where these solvents are used. All solvents in this building are used in the mixing area of Shop 302.

Assumptions:

The building's SOPs require the use of small quantities of 1,1,1-trichloroethane, toluene, and methyl ethyl ketone. The solvent is typically poured into a paper cup and applied to the equipment with a cloth. The paper cup and cloth are then disposed of in day cans that are removed daily and taken to the SAA to be disposed by the hazardous waste contractor.

No 1,1,1-trichloroethane, toluene, or methyl ethyl ketone is discharged to the LAS based on SOPs and the absence of floor drains in the building.

TENANT COMMAND : SWFLANT BUILDING 3035 : Motor Transfer Facility

Description of Operations:

Personnel in the Motor Transfer Facility (MTF) perform missile motor changes and cleaning activities in connection with motor receipt and shipment.

Discharge to WWTFs:

The floor drains and sanitary sewer system in this building discharge to the LAS. The only floor drain in the building is a trench in the rail area. There is an eyewash station in the building, but there is no floor drain in the area.

Solvent Usage:

According to personnel interviewed, 1,1,1-trichloroethane is transferred from a 5 gallon can to a plastic spray bottle. The material is sprayed onto the equipment for removal of heavy grease.

Assumptions:

It is assumed that none of the 1,1,1-trichloroethane is discharged to the LAS based on SOPs and because the solvent is not handled in an area with access to the sanitary sewer system.

TENANT COMMAND : SWFLANT BUILDING 3039/3040 : Missile Assembly Buildings

Description of Operations:

In each of the Missile Assembly Buildings (MAB), personnel assemble the three missile stages and perform preventive maintenance on the shop equipment. Other shop operations include electrical and mechanical repair work, touch-up painting, and general cleaning with solvents.

Component Cleaning Operations: These operations remove contaminants in various component cleaning processes.

Missile Assembly Operations: These operations involve the assembly of missile components into an operationally capable missile.

Painting Operations: These operations are confined to touch up painting in preparation for placing each missile in service. The painting cleanup process requires the use of various solvents to remove residual paints from paint equipment. The resulting paint-contaminated solvents are collected in a storage container and handled by the hazardous waste contractor.

Discharge to WWTFs:

The floor drains in the administrative portion of the buildings and the sanitary sewer system in this building discharge to the LAS. There are no floor drains in the production area or at the eyewash/safety showers.

Solvent Usage:

1,1,1-Trichloroethane and freon are used in this building to remove paint and to clean surfaces that will be painted. Neither solvent is handled in an area with a floor drain.

Assumptions:

Based on interviews, it was apparent that personnel were unsure of the weekly usage for 1,1,1-trichloroethane and freon. The quantities reported in the "Usage Report by Building" are assumed to have been used at an average rate over the 11 month report period.

The building's SOPs require the use of small quantities of 1,1,1-trichloroethane and freon. The solvent is typically poured into a paper cup and applied to the equipment with a cloth. The paper cup and cloth are then disposed of in day cans that are removed daily and taken to the SAA to be disposed by the hazardous waste contractor.

1,1,1-Trichloroethane and freon are not handled in areas with floor drains.

TENANT COMMAND : SWFLANT BUILDING 3044 : Radiation Inspection Building

Description of Operations:

The Radiation Inspection Building (RIB) contains specialized radiographic equipment used to inspect missile motors and assorted ordnance items. RIB personnel perform preventive maintenance and equipment painting operations on the equipment located in the building according to specified procedures.

Preventive Maintenance Operations: These operations include various cleaning and light maintenance activities performed at specified intervals on radiographic equipment.

Equipment Painting Operations: These operations are restricted to hand painting of small surface areas during maintenance activities.

Discharge to WWTFs:

The floor drains and sanitary sewer system in this building discharge to the LAS.

Solvent Usage:

According to personnel interviewed, 1,1,1-trichloroethane and freon are used in this building to clean equipment surfaces. Personnel reported that these solvents are used in small quantities and in accordance with SOPs requiring their disposal in day cans.

Assumptions:

Based on interviews, personnel were unsure of the weekly usage, and no usage rate was noted in the "Usage Report by Building." Because no discharge is anticipated based on SOPs and the lack of floor drains in the areas where the solvents are handled, the actual usage was not pursued.

The building's SOPs require the use of small quantities of 1,1,1-trichloroethane and freon. The solvent is typically poured into a paper cup and applied to the equipment with a cloth. The paper cup and cloth are then disposed of in day cans, which are removed daily and taken to the SAA to be disposed by the hazardous waste contractor.

1,1,1-Trichloroethane and freon are not handled in areas with floor drains.

TENANT COMMAND : SWFLANT

BUILDING 3047/3048 : Vertical Missile Packaging Buildings

Description of Operations:

The Vertical Missile Packaging Buildings conduct identical operations that involve the final missile assembly step.

Component Cleaning Operations: These operations remove contaminants in various component cleaning processes.

Missile Assembly Operations: These operations involve the assembly of missile components into an operationally capable missile.

Painting Operations: These operations are confined to touch up painting in preparation for placing each missile in service. The painting cleanup process requires the use of various solvents to remove residual paints from painting equipment. The resulting paint-contaminated solvents are collected in a storage container and handled by the hazardous waste contractor.

Discharge to WWTFs:

The floor drains and the sanitary sewer system discharge to the LAS.

Solvent Usage:

Personnel interviewed reported the use of 1,1,1-trichloroethane (1 pint per week), toluene (less than 1 pint per year), freon (1 pint per week), and methyl ethyl ketone (less than 1 pint per year) in this building. The 1,1,1-trichloroethane and freon are not used in areas with floor drains. SOPs require that the solvents be poured in small quantities into a paper cup, then applied with cloths. These contaminated cups and cloths are properly disposed of; all subparagraph A and B solvents are disposed of in this manner. Solvents are not discharged into drains during standard operations.

Assumptions:

The building's SOPs require the use of small quantities of 1,1,1-trichloroethane, toluene, freon, and methyl ethyl ketone. The solvent is typically poured into a paper cup and applied to the equipment with a cloth. The paper cup and cloth are then disposed of in day cans, which are removed daily and taken to the SAA to be disposed by the hazardous waste contractor.

1,1,1-Trichloroethane and freon are not handled in areas with floor drains.

The quantities reported in the "Usage Report by Building" are assumed to have been used at an average rate over the 11 month report period.

TENANT COMMAND : SWFLANT BUILDING 6004 : Technical Services Building

Description of Operations:

Calibration Laboratory: This laboratory performs mechanical, hydraulic, pneumatic, electronic, and other calibrations on tools and equipment used throughout SWFLANT, other SUBASE commands, and on submarines. Some of the operations contained within the building include:

- | | |
|---|---|
| <ul style="list-style-type: none"> •Oxygen Gauge Calibration •Frequency Standards Lab •AC/DC Measurement •Sound and Vibration Lab •Torque and Force Measurement •Mechanical Repair •Temperature and Humidity Calibration | <ul style="list-style-type: none"> •Optical Dimensional Calibration •Pressure/Vacuum Lab •Electronic Calibration •Microwave Measurement •Mass Lab •Electronic Instrument Repair |
|---|---|

Discharge to WWTFs:

The floor drains and sanitary sewer system in this building discharge to the LAS. A floor drain was noted in Shop 144-Calibration Lab.

Solvent Usage:

1,1,1-Trichloroethane and freon were seen to be used in this building. According to personnel interviewed, small quantities of 1,1,1-trichloroethane (four 16-ounce aerosol cans per year) are used for cleaning equipment parts and freon (15 gallons per year) is used and recycled for cleaning and calibration of equipment.

Demonstration of Quantity not Discharged:

SOLVENT NAME	Weekly Usage (gal)	Potential for Discharge
1,1,1-Trichloroethane (B)	0.01	NO
Freon (B)	0.3	YES

Assumptions:

Because the 1,1,1-trichloroethane is used in small quantities and in aerosol form, no discharge to the LAS is expected.

Although it is unlikely that freon is being discharged to the LAS from the Calibration Lab, the potential for discharge exists. The 5-gallon cans of freon are stored on the floor near a floor drain, and operations require the transfer of freon from the can to a small beaker without any containment present for spillage.

Comment Number	Page No.2	Comment	Response
1.	2-4 / Figure 2-1	Figure is illegible; need to show cross-section line for page 4-26.	Revised.
2.	ii / Executive summary	Verb missing.	Revised.
3.	ii / Executive summary	Word should not be capitalized.	Revised.
4.	ii / Executive summary	Use acronym for Interim Corrective Measure Screening Investigation.	Not revised. Not appropriate to abbreviate when only used once. Did not use acronym in report.
5.	iv / Acknowledgements	Acknowledgement page should be omitted.	Deleted.
6.	1-1	Change the word developed ?	Revised for clarification.
7.	1-1	Insert "Camden" before "county's."	Revised.
8.	1-3	Improper verb tense.	Revised.
9.	1-3	Insert "reportedly."	Revised.
10.	1-3	Question about use of fuel to ignite fires.	Revised. This is unknown.
11.	1-3	Reword sentence to emphasize non-potable use of groundwater.	Revised.
12.	1-4	Label Crooked River; show north arrow.	Revised.
13.	1-5	Delete contractor reference.	Deleted.
14.	1-6 / Figure 1-3	Change direction of groundwater flow.	Revised to show recharge from landfill and general flow direction.

Comment Number	Page No.2	Comment	Response
15.	1-7 / Figure 1-4	Question concerning groundwater flow between KBA-11-8 and KBA-11-9.	Revised to show flow north and south from KBA-11-8 (mound).
16.	1-8	Insert sentence regarding description of a work plan.	Inserted sentence indicating work plan set forth methodology for investigating Sites 5, 11, & 16. Second sentence of next paragraph identifies elements of the investigations.
17.	1-8	Describe location of subdivision relative to Spur 40.	Revised.
18.	1-11	Insert "SI" after RFI.	Deleted "SI" throughout report except when part of document title.
19.	2-1	Delete contractor reference.	Deleted.
20.	2-3	Delete contractor reference.	Deleted.
21.	2-5	Delete contractor reference.	Deleted.
22.	2-5	Questioned use of "check-valve" versus "seat".	Not revised.
23.	2-6	Description of sample locations is misleading.	Revised.
24.	2-6	Change "an" to "the."	Revised.
26.	2-6	Delete US from USEPA.	Not revised. USEPA is consistent with other documentation for Site 11.
26.	2-6	Delete subcontractor reference.	Deleted.
27.	2-7	Specify depth of soil vapor sampling.	Revised.
28.	2-7	Describe location of soil vapor locations in landfill relative to disposal trenches.	Revised.

Comment Number	Page No.2	Comment	Response
29.	2-7	Delete contractor reference.	Deleted.
30.	2-8	Highlight hydrocone locations on Figure 2-1, and 2-2 where PVC casings were used.	Figure appears prior to discussion of PVC casings. Not revised because locations are sequential and easy to remember. Note, PVC did not extend to sample depths.
31.	2-10	Uncertainty of figure location relative to reference in text.	Figure out of place. Revised.
32.	2-10	Delete US from USEPA.	See comment 25.
33.	2-15	Delete contractor reference.	Deleted.
34.	3-9	Delete contractor reference.	Deleted.
35.	3-15	Delete contractor reference. from paragraph 3.2.2	Deleted.
36.	4-5	Question concerning construction/backflow potential for deep wells in subdivision.	Text revised for clarification. Little known about details of well construction. Backflow would not occur unless valves were opened, pipes filled with groundwater and then reversed flow to create a siphon effect.
37.	4-7 / Table 4-1	Add MCLs to tables.	Revised. MCLs added to tables (except surface water and sediment).
38.	4-11	Comment on depth and reliability of soil vapor tests.	Duplicate comment. Data are reliable. Text revised.
39.	4-11	Location of samples taken in landfill.	Text revised.
40.	4-12 / Table 4-3	Include depth on soil vapor data table.	Duplicate comment. Addressed in text. All depths the same. Not revised.
41.	4-13 / Table 4-4	Include MCLs on hydrocone data table.	Duplicate comment. Revised.

Comment Number	Page No.2	Comment	Response
42.	4-13 / Table 4-4	Highlight MCLs on hydrocone data table.	Not revised. Shading not allowed on table per Navy format.
43.	4-30	Relevance of reference to computer generated contours questioned.	Text revised for clarification.
44.	4-32 / Figure 4-3	Need to tie this to the plan view somehow. Doesn't agree with plan view.	Figures revised. Cross-sections are tied together on figure where cross-section locations are shown.
45.	4-33 / Figure 4-4	Need to tie to plan view.	Figures revised. See comment 44.
46.	4-35 / Figure 4-5	Show property lines; dash contours.	Figures revised.
47.	4-36 / Figure 4-6	Show distance across cross-section; doesn't agree with D-D.	Figures revised. Scale is provided.
48.	4-38 / Table 4-7	Display hits on PIW sample location diagram.	Not revised. This would be misleading as VOCs that were unrelated to plume were found in PIW samples. Some PIW hits were outside plume. PIW data for plume-related VOCs used for risk evaluation only and should not be used to indicate plume location. Use of glue in PIW construction could influence data. Dynamics of groundwater flow could influence VOC hits. Also, unnecessarily labels certain property in permanent record.
49.	6-4	Isn't it verified by off site lab?	Screening data not useable for risk evaluation.
50.	6-4	Don't contract lab results lend credence to field lab results?	See above.
51.	6-9	Add (bgs) after "feet."	Revised.
52.	6-9	Insert "via vadose zone" at end of sentence.	Revised.

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Screening Investigation Progress Report

Comment Number	Page No.2	Comment	Response
53.	6-10	Add "swimming" under bullet for inhalation of VOC's.	Not revised. Doesn't conform to risk scenario developed jointly by USEPA, Navy, and ABB-ES.
54.	6-10	Add (bgs) after "feet.	Revised.
55.	6-10	Delete redundant phrase.	Deleted.