

BILL RICHARDSON
Governor

DIANE DENISH
Lieutenant Governor

NEW MEXICO
ENVIRONMENT DEPARTMENT

Hazardous Waste Bureau

2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303

Phone (505) 476-6000 Fax (505) 476-6030

www.nmenv.state.nm.us



RON CURRY
Secretary

JON GOLDSTEIN
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

January 28, 2009

Neil Smith
Environmental Health and Safety Manager
Safety-Kleen Systems, Inc.
6625 Frye Road
Chandler, AZ 85226

**RE: APPROVAL OF A CLASS 1 PERMIT MODIFICATION
SAFETY-KLEEN, FARMINGTON, NM, EPA ID# NMD980698849
HWB-SKFA-08-001**

Dear Mr. Smith:

The New Mexico Environment Department (NMED) hereby approves Safety-Kleen System's July 16, 2008 Class 1 permit modification (with prior approval) to the Safety-Kleen Farmington Storage Facility RCRA Permit Number NMD980698849. This modification was required by the Settlement Agreement and Stipulated Final Order dated June 19, 2008.

This modification consists of two parts regarding operations at the 12,000-gallon spent solvent storage tank. The first part is described as follows:

Section 4.6 of Part 4 of the Operating Permit has been revised to add the following sentence to the end of the Section: "The Permittee shall test the high-level alarm system for operability each day that waste is transferred into the spent solvent tank prior to any such waste transfers taking place."

Neil Smith
January 28, 2009
Page 2 of 2

The second part is described as follows:

The last paragraph on page 1-6 of Permit Attachment 1 has been revised to read as follows:

“The secondary containment is provided with a leak detection system that is designed and operated to detect failure of the primary containment structure and the presence of any release of hazardous waste or accumulated liquids in the secondary containment system within 24 hours. The leak detection system has been installed in accordance with Attachments 1, 2 and 3 which are included in Attachment 1-1 of this Permit.”

The revised pages have been included with this letter and must be inserted into the Permit as replacement pages. Attachments 1, 2 and 3, which were included in the Permit Modification Request, should also be inserted into Attachment 1-1 of Permit Attachment 1. Please note that a manual change to the Table of Contents at the beginning of the Permit should be made to indicate that Section 4.7.3 of Permit Part 4 is now located on Page 55.

If you have any questions regarding this letter, please contact David Strasser at (505) 222-9526.

Sincerely,



James P. Bearzi
Chief
Hazardous Waste Bureau

cc: J. Kieling, NMED HWB
A. Vollmer, NMED HWB
W. Moats, NMED HWB
D. Strasser, NMED HWB
L. King, EPA Region 6 (6PD-N)
File: SKFA 2009 and Reading
HWB-SKFA-08-001

4.6 OPERATING REQUIREMENTS

The Permittee shall not place hazardous wastes or treatment reagents in the spent solvent tank system if they could cause the tank, its ancillary equipment, or the containment system to rupture, leak, corrode, or otherwise fail. The Permittee shall prevent spills and overflows from the tank or containment systems using the methods described in Permit Attachment 6, *Preparedness and Prevention*, as required by 20.4.1.500 NMAC (incorporating 40 CFR 264.194(a) and (b)). The Permittee shall test the high-level alarm system for operability each day that waste is transferred into the spent solvent tank prior to any such waste transfers taking place.

4.7 RESPONSE TO LEAKS OR SPILLS

In the event of a leak or a spill from the tank system, from a secondary containment system, or if a system becomes unfit for continued use, the Permittee shall remove the system from service immediately and complete the following actions as specified in 20.4.1.500 NMAC (incorporating 40 CFR 264.196):

4.7.1 Cessation Of Use

Stop the flow of hazardous waste into the system and inspect the system to determine the cause of the release as required by 20.4.1.500 NMAC (incorporating 40 CFR 264.196(a));

4.7.2 Removal Of Waste

The Permittee shall remove waste and any accumulated precipitation from the system within 24 hours of the detection of the leak to prevent further release and to allow inspection and repair of the system. If the Permittee demonstrates that it is not possible to meet this time period, the Permittee shall notify the Secretary and demonstrate that the longer time period is required pursuant to 20.4.1.500 NMAC (incorporating 40 CFR 264.196(b)).

If the collected material is a RCRA hazardous waste, it shall be managed in accordance with all applicable requirements of 20.4.1 NMAC (incorporating 40 CFR 264 through 40 CFR 270). If the collected material is discharged through a point source to U.S. waters or to a Publicly Owned Wastewater Treatment facility, it is subject to requirements of the Clean Water Act. If the collected material is released to the environment, it may be subject to reporting under 40 CFR Part 302.

4.7.3 Containment

The Permittee shall immediately conduct a visual inspection of all releases to the environment to prevent further migration of the leak or spill to soils or surface water and remove and properly dispose of any visible contamination of the soil or surface water as required by 20.4.1.500 NMAC (incorporating 40 CFR 264.196(c)).

4.7.4 Notification And Reports

The Permittee shall report to the Secretary within 24 hours of detection when a leak or spill occurs from the tank system or secondary containment system to the environment pursuant to 20.4.1.500 NMAC (incorporating 40 CFR 264.196(d)(1)).

A leak or spill is exempted from these requirements if the quantity of waste leaked or spilled is one pound or less and is immediately contained and cleaned up as required by 20.4.1.500 NMAC (incorporating 40 CFR 264.196(d)(2)). If the Permittee has reported the release pursuant to 40 CFR Part 302, this report will satisfy the requirements of this Permit Condition.

Within 30 days of detection of a release to the environment from the tank system or secondary containment system, the Permittee shall report the following information to the Secretary as required by 20.4.1.500 NMAC (incorporating 40 CFR 264.196(d)(3));

1. Likely route of migration of the release;
2. Characteristics of the surrounding soil (including soil composition, geology, hydrogeology, and climate);
3. Results of any monitoring or sampling conducted in connection with the release. If the Permittee finds it will be impossible to meet this time period, the Permittee shall provide the Secretary with a schedule of when the results will be available. This schedule shall be submitted for approval before the required 30-day submittal period expires and shall provide for submission of data as soon as possible;
4. Proximity of downgradient drinking water, surface water, and populated areas;
5. Description of response actions taken or planned.

4.7.5 Provision of Secondary Containment

Unless the Permittee satisfies the requirements of 20.4.1.500 NMAC (incorporating 40 CFR 264.196(e)(2) through 40 CFR

264.196(e)(4)), the tank system must be closed in accordance with 20.4.1.500 NMAC (incorporating 40 CFR 264.197).

4.7.5.a Releases Caused By Spills

For a release caused by a spill that has not damaged the integrity of the system, the Permittee shall remove the released waste and make any necessary repairs to fully restore the integrity of the system before returning the tank system to service as required by 20.4.1.500 NMAC (incorporating 40 CFR 264.196(e)(2)).

4.7.5.b Tank Leaks

For a release caused by a leak from the primary tank system to the secondary containment system, the Permittee shall repair the primary system prior to returning it to service as required by 20.4.1.500 NMAC (incorporating 40 CFR 264.196(e)(3)).

4.7.5.c Releases To The Environment

For a release to the environment caused by a leak from the aboveground portion of the tank system that does not have secondary containment, and can be visually inspected, the Permittee shall repair that portion of the tank system prior to returning it to service in accordance with 20.4.1.500 NMAC (incorporating 40 CFR 264.196(e)(4)). The repaired portion of the tank system may be returned to service without secondary containment provided that the requirements of 20.4.1.500 NMAC (incorporating 40 CFR 264.196(f)) are satisfied.

4.7.5.d Tank Component Replacement

If the Permittee replaces a component to comply with the requirements of 20.4.1.500 NMAC (incorporating 40 CFR 264.196(e)(4)), that component must therefore satisfy the requirements for new tank systems or components pursuant to 20.4.1.500 NMAC (incorporating 40 CFR 264.192 and 40 CFR 264.193).

4.7.5.e Tank System Repairs

For all major repairs to eliminate leaks or restore the integrity of the tank system, the tank system shall not be returned to service unless the Permittee has obtained a certification by an independent, qualified, registered professional engineer pursuant to 20.4.1.900 NMAC (incorporating 40 CFR 270.11(d)), that the repaired system is capable of handling hazardous wastes without release for the intended life of the system. This certification shall be submitted to the Secretary within 7 days after returning

the tank system to use as required by 20.4.1.500 NMAC (incorporating 40 CFR 264.196(f)).

4.8 CLOSURE AND POST CLOSURE

4.8.1 Closure

During closure of the tank system, the Permittee shall remove or decontaminate all waste residues, contaminated system components, contaminated soils, structures and equipment contaminated with waste, and manage them as hazardous waste unless 20.4.1.200 NMAC (incorporating 40 CFR 261.3(d)) applies. The closure plan, closure activities, cost estimates for closure, and financial responsibility for tank systems must meet all of the requirements specified in 20.4.1.500 NMAC (incorporating 40 CFR 264 Subparts G and H) and in accordance with Permit Attachment 10, *Closure Plan*.

4.8.2 Post-Closure

If the Permittee demonstrates that not all contaminated soils can be practically removed or decontaminated as required in 4.8.1, then the Permittee shall close the tank system and perform post-closure care in accordance with the closure and post-closure care requirements that apply to landfills pursuant to 20.4.1.500 NMAC (incorporating 40 CFR 264.197(b)). In addition, for the purposes of closure, post-closure, and financial responsibility, such a tank system is then considered to be a landfill, and the Permittee shall meet all requirements for landfills as specified in 20.4.1.500 NMAC (incorporating 40 CFR 264 Subparts G and H).

4.9 SPECIAL REQUIREMENTS FOR IGNITABLE OR REACTIVE WASTES

The Permittee shall not place ignitable or reactive waste in the tank system or in the secondary containment system, unless the requirements of 20.4.1.500 NMAC (incorporating 40 CFR 264.198) are satisfied.

The Permittee shall comply with the requirements for the maintenance of protective distances between the waste management area and any public ways, streets, alleys, or an adjoining property line that can be built upon, as required in Tables 2-1 through 2-6 of the National Fire Protection Association's *Flammable and Combustible Liquids Code*, (1977 or 1981), as required by 20.4.1.500 NMAC (incorporating 40 CFR 264.198(b)).

4.10 SPECIAL REQUIREMENTS FOR INCOMPATIBLE WASTES

The Permittee shall not store incompatible wastes, or incompatible wastes and materials in the tank system, or place

hazardous waste in a tank system that has not been decontaminated that previously held an incompatible waste or material unless the requirements of 20.4.1.500 NMAC (incorporating 40 CFR 264.17(b)) are satisfied pursuant to 20.4.1.500 NMAC (incorporating 40 CFR 264.199).

4.11 AIR EMISSION STANDARDS

The Permittee shall manage all hazardous waste placed in a tank in accordance with the applicable requirements of 20.4.1.500 NMAC (incorporating 40 CFR 264 Subparts BB, and CC) pursuant to 20.4.1.500 NMAC (incorporating 40 CFR 264.200) and as required by Parts 6 and 7 of this Permit.

reflect sunlight. The tank is constructed in accordance with the Underwriters Laboratories Standard 142 and is located more than 15 feet from the property line as required by the National Fire Protection buffer zone requirements. Ancillary equipment to the spent solvent storage tank includes a return and fill station containing an enclosed drum washer/dumpster into which the contents of a drum of used solvent is emptied. A maximum volume of 375 gallons is retained in the drum/washer dumpster. The return and fill station is a concrete block structure with a metal roof and is equipped with monolithically poured concrete secondary containment with a capacity of 730 gallons. The drum washer is tight-piped to the spent solvent storage tank with welded joints and above ground piping.

The 12,000-gallon spent solvent tank is located within the secondary containment area. The secondary containment area for the tank consists of a monolithically poured slab and concrete block dike wall with steel reinforced cement. The secondary containment area measures 37 feet by 22 feet by 3 feet and is sized to contain 18,266 gallons. The slab is 6 inches thick and the walls are eight inches thick.

The spent solvent storage tank is equipped with an audible siren and visual strobe light high level alarm system which will alert personnel when the tank is 600 gallons (95%) from being full.

Additional secondary containment requirements for the spent solvent storage tank and related appurtenances are as follows:

1. The secondary containment system must be installed, designed, and operated to prevent the migration of wastes or accumulated liquid out of the system to the soil, ground water, or surface water at any time during the use of the tank system, and capable of detecting and collecting releases and accumulated liquids until the collected material is removed in accordance with 20.4.1.500 NMAC (incorporating 40 CFR 264.193(b)(1) and (2)).
2. The secondary containment system is provided with a leak detection system that is designed and operated to detect the failure of the primary containment structure and the presence of any release of hazardous waste or accumulated liquids in the secondary containment system within 24 hours. The leak detection system has been installed in accordance with Attachments 1, 2 and 3 which are included in Attachment 1-1 of this Permit Attachment.

3. The secondary containment system shall be sloped or otherwise designed or operated to drain and remove liquids resulting from leaks, spills, or precipitation. Spilled or leaked waste and accumulated precipitation shall be removed from the secondary containment system within 24 hours, or as timely a manner as is possible to prevent harm to human health and the environment if the owner or operator can demonstrate to the Secretary that the removal cannot be accomplished within 24 hours in accordance with 20.4.1.500 NMAC (incorporating 40 CFR 264.193(c)(4)).
4. Ancillary equipment shall be provided with secondary containment meeting the requirements of 20.4.1.500 NMAC (incorporating 40 CFR 264.193(b) and (c)), pursuant 20.4.1.500 NMAC (incorporating 40 CFR 264.193(f)(1) through (4)), except for:
 - a. Above ground piping visually inspected daily for leaks;
 - b. Welded flanges, welded joints, and welded connections visually inspected daily for leaks;
 - c. Seal-less or magnetic coupling pumps and seal-less valves visually inspected daily for leaks; and
 - d. Pressurized above ground piping systems with automatic shut off devices visually inspected daily for leaks.

ENTERED

SKFA



July 16, 2008

Mr. James Bearzi, Chief
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-2567

Re: Class 1 Permit Modification
Safety-Kleen Systems, Inc.
4210 A Hawkins Road, Farmington, NM 87401
EPA ID No. NMD 980698849

Dear Mr. Bearzi,

This submittal constitutes a notice of a two-part Class 1* Permit Modification as required under NMAC 20.4.1.900 and the Settlement Agreement and Stipulated Final Order dated June 19, 2008 and signed by Mr. Ron Curry, Secretary of Environment. This modification is being submitted as a Class 1 Permit Modification (*subject to approval from the New Mexico Environment Department).

The first part of this Class 1 Permit Modification is described as follows:

It is necessary for the Farmington branch to update the description of its operating procedures to ensure that wastes are not added to the spent solvent storage tank when the high-level alarm system is inoperable. The Farmington branch ensures that this requirement is met by testing the high-level alarm each day that waste is added to the spent solvent tank prior any waste transfer taking place. Safety-Kleen therefore requests the following sentence to be added to the end of Part B permit Section 4.6 paragraph:

“The Permittee shall test the high-level alarm system for operability each day that waste is transferred into the spent solvent tank prior to any such waste transfers taking place.”

The second part of this Class 1 Permit Modification is described as follows:

It is necessary for the Farmington branch to install a leak detection system designed to identify the release of hazardous waste to the secondary containment structure within 24 hours. Safety-Kleen has designed a leak detection system consisting of a high-level alarm that will be placed

Mr. James Bearzi, Chief
New Mexico Environment Department
re: Safety-Kleen Systems, Inc.- Class 1 Permit Modification
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beside the spent solvent tank approximately six inches from the base of the secondary containment structure. The sensor will be incorporated into the existing system to emit an audible alarm. Safety-Kleen requests that the last paragraph on page 1-6 of Attachment 1 to the Part B Permit be replaced with the following:

“The secondary containment is provided with a leak detection system that is designed and operated to detect the failure of the primary containment structure and the presence of any release of hazardous waste or accumulated liquids within 24-hours.”

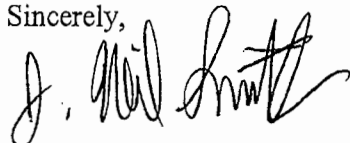
Information regarding leak detection system to be installed is included with this permit modification as follows:

- Attachment 1 Tank Farm Plan drawing
- Attachment 2 Tank Farm Leak Detection HLA Mounting drawing
- Attachment 3 Drexelbrook Intellipoint RF level indicator information

The contents of Attachment 1, Attachment 2, and Attachment 3 will augment the current contents of Attachment 1-1 of the Facility's Part B Permit.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to 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.

Sincerely,



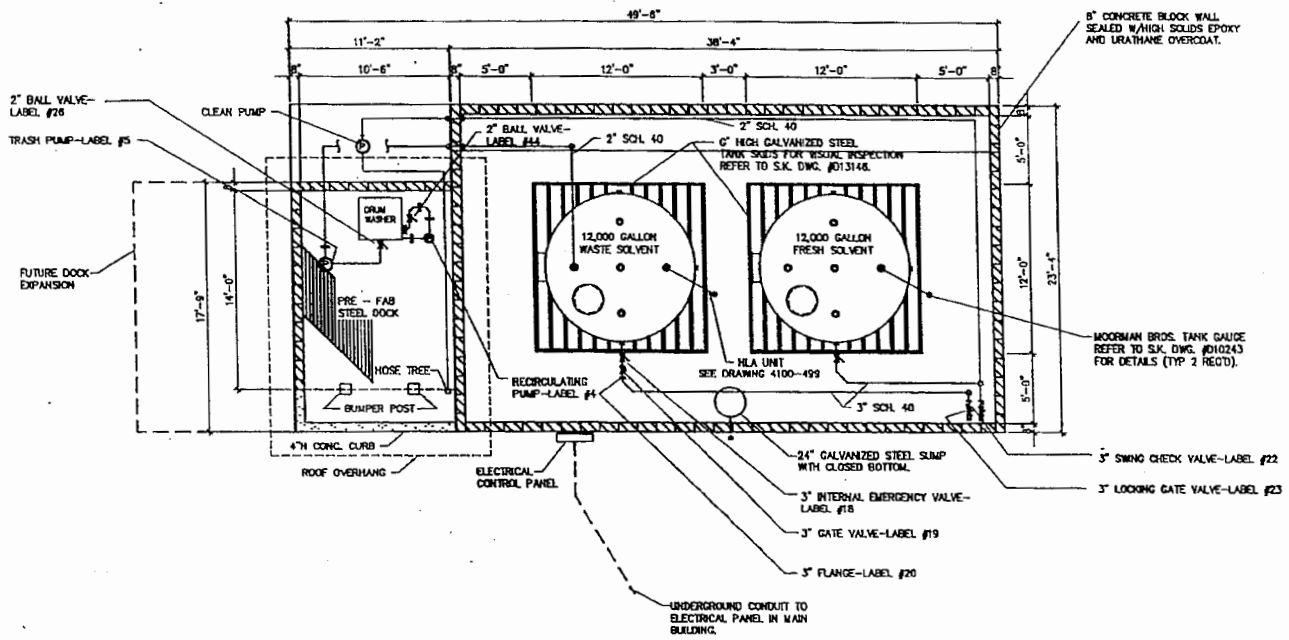
Neil Smith
Environmental Health & Safety Manager
Safety-Kleen Systems, Inc.

enclosures

cc: Randy Wood, Branch General Manager, Safety-Kleen Systems, Farmington NM

Mr. James Bearzi, Chief
New Mexico Environment Department
re: Safety-Kleen Systems, Inc.- Class 1 Permit Modification
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Attachment 1



DIKE VOLUME CALCULATION - 12,000 GAL STORAGE TANK (DIKE HEIGHT 3'-0")

FORMULAE USED:

$(\pi R^2 H) (7.48 \text{ GAL./S'CU. FT.}) = \text{TANK DISPLACEMENT VOLUME (GAL./S)}$

$(LWH) (7.48 \text{ GAL./S'CU. FT.}) = \text{DIKE VOL. (GAL./S)}$

R (TANK RADIUS) = 6'-0"

L (DIKE LENGTH) = 37'-0"

W (DIKE WIDTH) = 22'-0"

H (DIKE HEIGHT) = 3'-0"

DIKE VOLUME: $(44.08 \text{ FT.}) (20.5 \text{ FT.}) (3.0 \text{ FT.}) (7.48 \text{ GAL./S'CU. FT.}) = 19,266 \text{ GAL. (+)}$

VOLUME OF LARGEST TANK WITHIN DIKED AREA: = 12,000 GAL. (-)

TANK DISPLACEMENT VOLUME: $(\pi (6.25 \text{ FT.})^2 (3.0 \text{ FT.}) (7.48 \text{ GAL./S'CU. FT.})) (1 \text{ TANK}) = 2,115 \text{ GAL. (-)}$

RAINFALL ALLOWANCE 25 YR. 24 HR. AVERAGE (4.5") = 2,283 GAL. (-)

TOTAL (EXCESS) = 658 GAL.

CALC 2

PROPRIETARY STATEMENT

THIS DRAWING IS THE EXCLUSIVE PROPERTY OF SAFETY-KLEEN SYSTEMS, INC. AND IS PROPRIETARY AND CONFIDENTIAL INFORMATION. THIS DRAWING AND THE INFORMATION CONTAINED THEREIN MUST NOT BE REPRODUCED, COPIED, REPRODUCED, REPRODUCED, COPIED, REPRODUCED OR REPRODUCED IN WHOLE OR IN PART FOR ANY PURPOSE OTHER THAN AS EXPRESSLY AUTHORIZED BY SAFETY-KLEEN SYSTEMS, INC. THIS DRAWING MUST BE RETURNED PROMPTLY UPON REQUEST.

S Solutions
Company

3300 River Industrial Drive • Suite 202 • Columbia • MO 65206
Phone: (620) 643-7000 • Fax: (620) 643-7000

TITLE: **TANK FARM PLAN**
4200A HAWKINS RD.

S SAFETY-KLEEN SYSTEMS INC.

| NO. | DESCRIPTION | BY | CHK | APPR | DATE | SCALE | BY | CHK | APPR | DATE |
|-----|---|-----|-----|------|---------|-------|----|-----|------|------|
| 02 | ADD H.A. UNIT TO WASTE TANK | EA | OK | EE | 3-1-02 | | | | | |
| 03 | ADD VALVE DASH ON WASTE LINE | ALJ | | | 5-15-02 | | | | | |
| 04 | REVISED SAFETY BLEED DRAWING TO COME AS SHOWN | ALJ | | | 5-1-02 | | | | | |
| 05 | REVISED S.K. Dwg. 3-10-01 | | | | | | | | | |

DATE LICENSE BE OBTAINED IS 8:30 A.M. 3 PLANS TO 7:00P. 88-889-0746

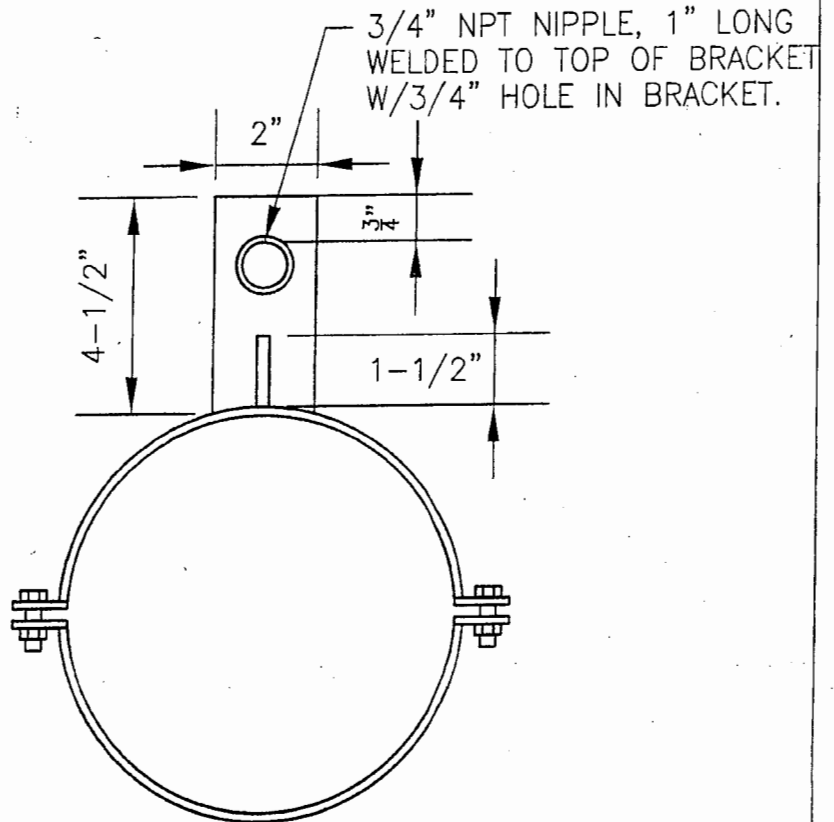
SERVICE CENTER BRANCH AT: FARMINGTON, NH

7122-4100-800-02

| NO. | DESCRIPTION | BY | CHK | APPR | DATE |
|-----|---|-----|-----|------|---------|
| 02 | ADD H.A. UNIT TO WASTE TANK | EA | OK | EE | 3-1-02 |
| 03 | ADD VALVE DASH ON WASTE LINE | ALJ | | | 5-15-02 |
| 04 | REVISED SAFETY BLEED DRAWING TO COME AS SHOWN | ALJ | | | 5-1-02 |
| 05 | REVISED S.K. Dwg. 3-10-01 | | | | |

Mr. James Bearzi, Chief
New Mexico Environment Department
re: Safety-Kleen Systems, Inc.- Class 1 Permit Modification
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Attachment 2



3/4" NPT NIPPLE, 1" LONG
WELDED TO TOP OF BRACKET
W/3/4" HOLE IN BRACKET.

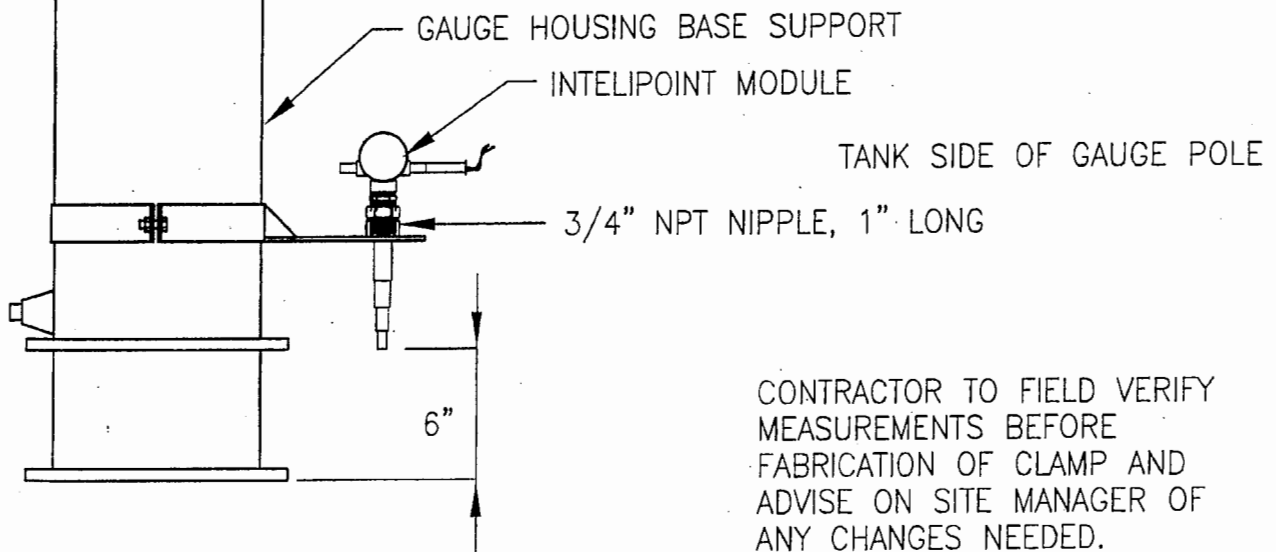
2"

4-1/2"

3/4"

1-1/2"

2" X 1/4" STEEL BAND, 5" DIA.
SPLIT, BOLTED WITH 2- 3/8" DIA.
BOLTS, NUTS, LOCKWASHERS



PROPRIETARY STATEMENT

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**TANK FARM LEAK DETECTION
HLA MOUNTING**

| | | | | | |
|---|--------|------|---------------|----------|----------|
| SAFETY-KLEEN SYSTEMS, INC. | | | | | |
| 5400 LEGACY DR. CLUSTER II, BLDG. 3 PLANO, TX. 75024 800-689-5740 | | | | | |
| SCALE | BY | CHKD | APPR | OP. APPR | DATE |
| NONE | J.E.K. | DZ | DZ | DZ | 7/01/08 |
| SERVICE CENTER LOCATION | | | SC-DWG NUMBER | | REV. NO. |
| FARMINGTON, N.M. | | | 7133-4100-499 | | A |



1390 Boone Industrial Drive • Suite 200 •
Columbia • MO 65202
Phone: (573) 443-7100
Fax: (573) 443-7161

Mr. James Bearzi, Chief
New Mexico Environment Department
re: Safety-Kleen Systems, Inc.- Class 1 Permit Modification
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Attachment 3

AMETEK[®]
DREXELBROOK

A Leader in Level Measurement

IntelliPoint RF™ Series

Two-Wire Point Level Switch



Intelligent Electronics

- No calibration or setpoint adjustments.
- Ignores changes in dielectric or conductivity.
- Automatically recognizes and ignores coatings to prevent false alarms.
- Continuous self-test monitors circuits and sensing elements for faults.

Diverse Applications

- Detects the absence or presence of liquids, slurries, interfaces and granulars.

Output

- 8mA (Alarm) 16mA (Normal) or 8mA (Normal) and 16 mA (Alarm)

No Calibration

The only RF switch you won't calibrate. Simply install the IntelliPoint RF Series into the tank and apply power...that's it! Unlike other RF or capacitance systems that require calibration via setpoint potentiometers, jumpers, magnets, or pushbuttons, the IntelliPoint RF Series reliably detects the absence or presence of material without any adjustments.

The IntelliPoint RF Series software continuously monitors the application for changes in composition, dielectric or conductivity, and maintains a repeatable trip point on the probe. Other RF and capacitance systems require calibration adjustments when the process material is changed. Since the the IntelliPoint RF Series recognizes changes in material, it is ideal for non-dedicated tanks that are used for a wide variety of products.

Self-Test Feature

Automatic and manual self-test functions ensure proper system operation. An AutoVerify™ self-check circuit continuously monitors that the complete system is functioning properly. The Manual Certify not only checks the function of the system, but also checks the AutoVerify self-test circuits to make sure that they are also working properly.

Dual Compartment Housing

New dual compartment housing separates the customer wiring from the sensing element and operating circuits. The encapsulated power supply/terminal block design eliminates the possibility of damage caused by moisture in the conduit.

Specifications

Technology:
RF Admittance.

Calibration:
None.

Modes Of Operation:
High and Low Level.

Repeatability:
2 mm (0.08 inch) conductive liquids.

Response Time:
less than one second.

Ambient Electronic Temperature:
-30 to 70°C (-28 to 158°F)

Storage Temperature:
-40 to 85°C (-40 to 185°F).

Indicators:
LEDs: Green Power, Red Alarm.

Self-Check:
AutoVerify automatically and continuously checks electronics and sensing element for faults. Manual Certify checks that the AutoVerify circuits are functioning.

Time Delay:
0-60 seconds, forward or reverse-acting.

Supply Voltage:
13-30 Vdc

Power Consumption:
2 watts maximum.

Output:
8 mA - Alarm.
16 mA - Normal.
22 mA - Fault.
or
8 mA - Normal.
16 mA - Alarm.
5 mA - Fault.

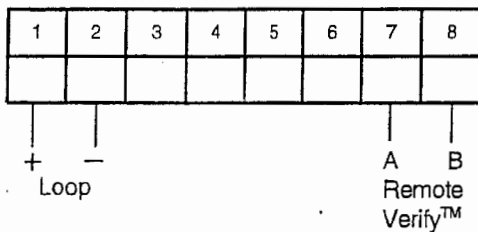
Housing:
Dual Compartment, Powder-Coated aluminum with two cable entries.

Cable Entry:
M20 x 1.5 GENELEC
¾-inch NPT FM/CSA.

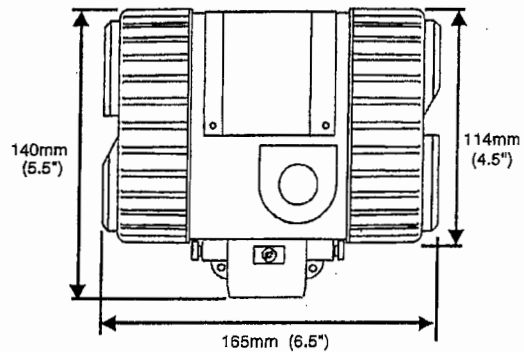
Ingress Protection:
IP66 NEMA 4X.

Approvals:
FM and CSA pending.

Wiring



Dimensions



Model Numbering (cont.)

Sensing Element continued from previous page

| Fly Ash Precipitators, Baghouse, and Economizers (1) (6) | | | |
|---|-----------------|---------------------------------|------------------------------|
| Application | Sensing Element | Pressure/Temperature | Wetted Parts |
| 31 No hopper installation | 700-0029-001 | 0.1 bar @ 260°C (2 PSI @ 500°F) | 316SS and TFE (CS Inactive) |
| 32 Hopper installation up to 200mm (8 inches) | 700-0029-002 | 0.1 bar @ 260°C (2 PSI @ 500°F) | 316SS and TFE (CS Inactive) |
| 33 Hopper installation up to 250mm (10 inches) | 700-0029-003 | 0.1 bar @ 260°C (2 PSI @ 500°F) | 316SS and TFE (CS Inactive) |
| 35 Hopper installation up to 400mm (16 inches) | 700-0029-005 | 0.1 bar @ 260°C (2 PSI @ 500°F) | 316SS and TFE (CS Inactive) |
| Plugged Chute Detection (1) (5) | | | |
| Application | Sensing Element | Pressure/Temperature | Wetted Parts |
| 50 Flush Mount Sensor 305mm ² (12 inches ²) heavy duty | 700-0207-001 | 0.1 bar @ 82°C (1 PSI @ 180°F) | 304 SS and Polyurethane |
| 51 Flush Mount Sensor 305mm ² (12 inches ²) higher temperature | 700-0207-002 | 0.1 bar @ 149°C (1 PSI @ 300°F) | 304 SS and TFE |
| 52 Flush Mount Sensor 305mm ² (12 inches ²) with curved radius 153, 229, 305 mm (6, 9, or 12 inches) | 700-0207-003 | 0.1 bar @ 82°C (1 PSI @ 180°F) | 304 SS and Neoprene |
| 53 Flush Mount Sensor 305mm ² (12 inches ²) extra heavy duty | 700-0207-004 | 0.1 bar @ 82°C (1 PSI @ 180°F) | 410 SS and UHMW Polyethylene |
| 55 Flush Mount Sensor 203mm ² (8 inches ²) heavy duty | 700-0207-006 | 0.1 bar @ 82°C (1 PSI @ 180°F) | 304 SS and Polyurethane |

Mounting Type (See separate Mounting Chart for first three digits)

| | IL | CSL | | IL | CSL |
|------|--------------|--------------|------|--------------------------------------|--------------|
| xxxA | 152 mm (6") | 51 mm (2") | xxxH | 914 mm (36") | 254 mm (10") |
| xxxB | 305 mm (12") | 51 mm (2") | xxxJ | 914 mm (36") | 0 mm (0") |
| xxxC | 305 mm (12") | 89 mm (3.5") | xxxK | 1219 mm (48") | 254 mm (10") |
| xxxD | 457 mm (18") | 51 mm (2") | xxxL | 1524 mm (60") | 254 mm (10") |
| xxxE | 457 mm (18") | 89 mm (3.5") | P00X | IL/CSL factory set for Plugged Chute | |
| xxxF | 457 mm (18") | 254 mm (10") | A1BX | IL/CSL factory set for Fly Ash | |
| xxxG | 457 mm (18") | 0 mm (0") | xxxZ | Other | |

RINT 0

- Notes: (1) Available with remote electronics only
 (2) Use A1P mounting option
 (3) Choose from sanitary mounting options only
 (4) Available with 0-inch CSL only
 (5) Use P00X mounting option
 (6) Use A1B mounting option
 (7) Use A8B mounting option (¼-inch NPT)
 (8) Choose from flange mounting only
 (9) FM approved with remote electronics only
 Not all mounting options available with all sensing elements

| NPT Threads | | |
|-------------|--------|-------------|
| A1B | ¾" NPT | 316SS |
| A1C | ¾" NPT | Hastelloy C |
| A1P | ¾" NPT | PFA |
| A2B | 1" NPT | 316SS |
| A2C | 1" NPT | Hastelloy C |

| Sanitary TriClamps | | |
|--------------------|--------------|-------|
| C2B | 1" TriClamp | 316SS |
| C3B | 1½" TriClamp | 316SS |
| C4B | 2" TriClamp | 316SS |

| DIN Flanges | | |
|-------------|---------------|----------------|
| E01 | 25 mm 16bar | RF 316/316L SS |
| EP1 | 25 mm 40 bar | RF 316/316L SS |
| EQ1 | 50 mm 16 bar | RF 316/316L SS |
| ER1 | 50 mm 40 bar | RF 316/316L SS |
| ES1 | 80 mm 16 bar | RF 316/316L SS |
| ET1 | 80 mm 40 bar | RF 316/316L SS |
| EU1 | 100 mm 16 bar | RF 316/316L SS |
| EV1 | 100 mm 40 bar | RF 316/316L SS |
| EW1 | 150 mm 16 bar | RF 316/316L SS |
| EX1 | 150 mm 40 bar | RF 316/316L SS |

| DIN Flanges (cont.) | | |
|---------------------|---------------|-----------------|
| E02 | 25 mm 16 bar | RF Carbon Steel |
| EP2 | 25 mm 40 bar | RF Carbon Steel |
| EQ2 | 50 mm 16 bar | RF Carbon Steel |
| ER2 | 50 mm 40 bar | RF Carbon Steel |
| ES2 | 80 mm 16 bar | RF Carbon Steel |
| ET2 | 80 mm 40 bar | RF Carbon Steel |
| EU2 | 100 mm 16 bar | RF Carbon Steel |
| EV2 | 100 mm 40 bar | RF Carbon Steel |
| EW2 | 150 mm 16 bar | RF Carbon Steel |
| EX2 | 150 mm 40 bar | RF Carbon Steel |

| ANSI Flanges | | |
|--------------|----------|----------------|
| DA1 | 1" 150# | RF 316/316L SS |
| DB1 | 1½" 150# | RF 316/316L SS |
| DC1 | 2" 150# | RF 316/316L SS |
| DD1 | 2½" 150# | RF 316/316L SS |
| DE1 | 1" 300# | RF 316/316L SS |
| DF1 | 1½" 300# | RF 316/316L SS |
| DG1 | 2" 300# | RF 316/316L SS |
| DH1 | 2½" 300# | RF 316/316L SS |
| DI1 | 3" 150# | RF 316/316L SS |

| ANSI Flanges (cont.) | | |
|----------------------|----------|-----------------|
| DJ1 | 3" 300# | RF 316/316L SS |
| DK1 | 4" 150# | RF 316/316L SS |
| DL1 | 4" 300# | RF 316/316L SS |
| DM1 | 6" 150# | RF 316/316L SS |
| DN1 | 6" 300# | RF 316/316L SS |
| DA2 | 1" 150# | RF Carbon Steel |
| DB2 | 1½" 150# | RF Carbon Steel |
| DC2 | 2" 150# | RF Carbon Steel |
| DD2 | 2½" 150# | RF Carbon Steel |
| DE2 | 1" 300# | RF Carbon Steel |
| DF2 | 1½" 300# | RF Carbon Steel |
| DG2 | 2" 300# | RF Carbon Steel |
| DH2 | 2½" 300# | RF Carbon Steel |
| DI2 | 3" 150# | RF Carbon Steel |
| DJ2 | 3" 300# | RF Carbon Steel |
| DK2 | 4" 150# | RF Carbon Steel |
| DL2 | 4" 300# | RF Carbon Steel |
| DM2 | 6" 150# | RF Carbon Steel |
| DN2 | 6" 300# | RF Carbon Steel |

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