PERMIT

Under the Environmental Conservation Law (ECL)

Permittee and Facility Information

Permit Issued To:
SAFETY-KLEEN SYSTEMS INC

2600 N CENTRAL EXPWY STE 400
RICHARDSON, TX 75080
(972) 265-2000

Facility:
SAFETY-KLEEN SYSTEMS INC - DEWITT FACILITY
6741 VIP PKWY
DEWITT, NY 13211

Facility Location: in DEWITT in ONONDAGA COUNTY
Facility Principal Reference Point: NYTM-E: 409.347 NYTM-N: 4772.44
Latitude: 43°05'57.3" Longitude: 76°06'50.3"

1. **Authorized Activity:** Storage of hazardous waste (D001, D004 - D011, D018, D019, D021-D030, D032-D042, D043) in a 20,000 - gallon aboveground tank as described in Module IV, Attachment IX and Attachment X of this permit.
2. Storage of 2400 gallons of Hazardous waste (D001, D004-D011, D018, D019, D021-D030, D032-D042, D043) in container storage area as described in Module III, Attachment VIII and Attachment X of this permit.
3. Truck storage of hazardous waste in containers prior to unloading as specified in Module IV, Attachment VIII of this permit.

Permit Authorizations

Resource Conservation and Recovery Act - Under Article 27, Title 9
Permit ID 7-3126-00134/00016
Renewal Effective Date: 9/14/2012 Expiration Date: 9/13/2022

NYSDEC Approval

By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the ECL, all applicable regulations, and all conditions included as part of this permit.

Permit Administrator: ELIZABETH A TRACY, Deputy Regional Permit Administrator
Address: NYSDEC REGION 7 HEADQUARTERS
615 ERIE BOULEVARD WEST
SYRACUSE, NY 13204 -2400

Authorized Signature: Elizabeth Tracy Date 9/12/12

Permit Components

RESOURCE CONSERVATION AND RECOVERY ACT PERMIT CONDITIONS

GENERAL CONDITIONS, APPLY TO ALL AUTHORIZED PERMITS

NOTIFICATION OF OTHER PERMITTEE OBLIGATIONS

RESOURCE CONSERVATION AND RECOVERY ACT PERMIT CONDITIONS

1. SPECIAL CONDITIONS

a. The permit is based on the information submitted in the permit application submitted by Safety Kleen on May 20, 2010 and subsequent updates through August 2005. The permit is based on the assumption that the information submitted by Safety Kleen in the above documents is complete and accurate and the facility will be constructed and operated as specified in the above application. Any inaccuracies or incompleteness found in the information may be grounds for the termination or modification of this permit and potential enforcement.

b. The permittee must comply with all terms and conditions of this permit. This permit consists of the conditions contained herein (including those in any attachments) and the applicable regulations contained in 6 NYCRR Parts 370 through 373-2, 376 and 621 (see Module I Condition A and Attachment XII). The permittee must inform DEC of any deviation from or changes in the information contained in the application which would affect the permittee's ability to comply with the regulations or permit conditions.

c. The permittee must operate the facility in strict accordance with the modules and attachments to this permit as specified below:

Module I	General Conditions
Module II	Corrective Action Requirements
Module III	Storage in Containers
Module III	Storage in Tank

Attachments

Attachment	I	Waste Analysis Plan
Attachment	II	Inspection
Attachment	III	Personnel Training
Attachment	IV	Plant Security
Attachment	V	Preparedness and Prevention
Attachment	VI	Contingency Plan
Attachment	VII	Closure Plan
Attachment	VIII	Management of Waste in Container
Attachment	IX	Management of Waste in Tank
Attachment	X	Air Emissions Standard for Equipment Leaks
Attachment	XI	Drawings, Certification, Part A Application, and Facility

		Description
Attachment	M	Major/Minor Permit Modifications
Attachment	XII	A CD containing the Applicable regulations 6 NYCRR Parts 370 through 373-2, 376 in effect on the date of the final issuance of this permit.

d. The permittee is responsible for verifying that the Quality Control/Assurance Program (QA/QC) followed by laboratories used by the permittee to carry out analysis of the waste streams, conform to the QA/QC procedures approved in the permit and thus ensure the validity of the analytical data provided by the laboratories.

e. As required by ECL 03-0119, Safety Kleen's laboratories or laboratories contracted by Safety Kleen to perform analysis pursuant to this permit must be certified by the New York State Department of Health Environmental Laboratory Approval Program (ELAP) in the appropriate categories of analysis, if ELAP issues certifications in such categories.

f. The permittee converted the previously permitted container storage areas at the facility to permit exempt storage areas and manage the storage of containers for up to 10 days (or less) in exempt storage areas as provided in 6 NYCRR Part 373-1.1(d)(xv). The permittee opted to close these storage areas at the time of the final closure of the facility. Until such time the permittee must maintain a closure plan and financial assurance for the cost estimate in Attachment VII of this permit pursuant to 6 NYCRR 373-2.7 and 373-2.8 for the following storage areas: (a) Tank Storage (20,000 gallons) and tanker/truck loading/unloading areas. (b) Transfer container Management Area (previously permitted area now used for 10-day incidental storage regulated by USDOT), and (d) Return and Fill Station container storage area.

GENERAL CONDITIONS - Apply to ALL Authorized Permits:

1. Facility Inspection by The Department The permitted site or facility, including relevant records, is subject to inspection at reasonable hours and intervals by an authorized representative of the Department of Environmental Conservation (the Department) to determine whether the permittee is complying with this permit and the ECL. Such representative may order the work suspended pursuant to ECL 71- 0301 and SAPA 401(3).

The permittee shall provide a person to accompany the Department's representative during an inspection to the permit area when requested by the Department.

A copy of this permit, including all referenced maps, drawings and special conditions, must be available for inspection by the Department at all times at the project site or facility. Failure to produce a copy of the permit upon request by a Department representative is a violation of this permit.

2. Relationship of this Permit to Other Department Orders and Determinations Unless expressly provided for by the Department, issuance of this permit does not modify, supersede or rescind any order or determination previously issued by the Department or any of the terms, conditions or requirements contained in such order or determination.

3. **Applications For Permit Renewals, Modifications or Transfers** The permittee must submit a separate written application to the Department for permit renewal, modification or transfer of this permit. Such application must include any forms or supplemental information the Department requires. Any renewal, modification or transfer granted by the Department must be in writing. Submission of applications for permit renewal, modification or transfer are to be submitted to:

Regional Permit Administrator
NYSDEC REGION 7 HEADQUARTERS
615 ERIE BOULEVARD WEST
SYRACUSE, NY13204 -2400

4. **Submission of Renewal Application** The permittee must submit a renewal application at least 180 days before permit expiration for the following permit authorizations: Resource Conservation and Recovery Act.

5. **Permit Modifications, Suspensions and Revocations by the Department** The Department reserves the right to exercise all available authority to modify, suspend or revoke this permit. The grounds for modification, suspension or revocation include:

a. materially false or inaccurate statements in the permit application or supporting papers;

b. failure by the permittee to comply with any terms or conditions of the permit;

c. exceeding the scope of the project as described in the permit application;

d. newly discovered material information or a material change in environmental conditions, relevant technology or applicable law or regulations since the issuance of the existing permit;

e. noncompliance with previously issued permit conditions, orders of the commissioner, any provisions of the Environmental Conservation Law or regulations of the Department related to the permitted activity.

6. **Permit Transfer** Permits are transferrable unless specifically prohibited by statute, regulation or another permit condition. Applications for permit transfer should be submitted prior to actual transfer of ownership.

NOTIFICATION OF OTHER PERMITTEE OBLIGATIONS

Item A: Permittee Accepts Legal Responsibility and Agrees to Indemnification
The permittee, excepting state or federal agencies, expressly agrees to indemnify and hold harmless the Department of Environmental Conservation of the State of New York, its representatives, employees, and agents ("DEC") for all claims, suits, actions, and damages, to the extent attributable to the permittee's acts or omissions in connection with the permittee's undertaking of activities in connection with, or operation and maintenance of, the facility or facilities authorized by the permit whether in compliance or not in compliance with the terms and conditions of the permit. This indemnification does not extend to any claims, suits, actions, or damages to the extent attributable to DEC's own negligent or

intentional acts or omissions, or to any claims, suits, or actions naming the DEC and arising under Article 78 of the New York Civil Practice Laws and Rules or any citizen suit or civil rights provision under federal or state laws.

Item B: Permittee's Contractors to Comply with Permit
The permittee is responsible for informing its independent contractors, employees, agents and assigns of their responsibility to comply with this permit, including all special conditions while acting as the permittee's agent with respect to the permitted activities, and such persons shall be subject to the same sanctions for violations of the Environmental Conservation Law as those prescribed for the permittee.

Item C: Permittee Responsible for Obtaining Other Required Permits
The permittee is responsible for obtaining any other permits, approvals, lands, easements and rights-of-way that may be required to carry out the activities that are authorized by this permit.

Item D: No Right to Trespass or Interfere with Riparian Rights
This permit does not convey to the permittee any right to trespass upon the lands or interfere with the riparian rights of others in order to perform the permitted work nor does it authorize the impairment of any rights, title, or interest in real or personal property held or vested in a person not a party to the permit.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SOLID & HAZARDOUS MATERIALS
PART 373 PERMIT MODULE I - GENERAL PROVISIONS

This permit authorizes only the hazardous waste units identified in this permit as permitted units. **This permit does not authorize other units to operate.** If this Permit conflicts with Regulations which are in effect on the date of final issuance of this Permit, the more stringent requirement applies.

A. EFFECT OF PART 373 PERMIT

The Permittee must comply with all terms and conditions of this Permit. This Permit consists of: the conditions contained herein, the attachments to this Permit, sections of the Permit Application referenced herein, any subsequent Department approved changes to the attachments and referenced sections of that Application, and the applicable regulations contained in 6NYCRR Parts 370 through 374, 376, 621 and 624 that are referenced herein. The applicable regulations or requirements are those which are in effect on the date of final issuance of this Permit, except for those requirements not included in the permit which:

(1) Become effective by statute, including amendments thereto;
(2) Are promulgated under 6NYCRR Part 376, as modified (Land Disposal Restrictions);
(3) Are promulgated under 6NYCRR 373-3.27, 373-3.28, and 373-3.29, as modified (air emission standards); and
(4) Are other requirements promulgated under 6NYCRR 373-1.6(e).

The Permittee is authorized to store hazardous waste in tank, and containers and is required to conduct corrective action if required in Module II of the permit. Any storage, treatment, or disposal of hazardous waste not authorized in this Permit is prohibited unless exempt from 6NYCRR Part 373. Issuance of this Permit does not authorize any injury to persons or property, any invasion of other private rights, or any infringement of federal, State or local laws or regulations.

The hazardous waste management units, activities and types and quantities of hazardous waste to be managed which are authorized by this Permit are listed below:

Units	Capacity (Gallons)	Waste Description	EPA Hazardous Waste Code No.	Secondary Containment Volume
Part Washer	20,000	Safety Kleen Part	D001, D004- D011,	22,000 gallons

Units	Capacity (Gallons)	Waste Description	EPA Hazardous Waste Code No.	Secondary Containment Volume
Storage Tank		Washer Solvents (Hydrocarbon-and Aqueous-Based	D018, D019, D021-D030, D032, - D043, Nonhazardous spent part washer solvents	(Steel dike aboveground tank)
Container Storage 54x20	2400 gallons**	same as above	same as above	4346 gallons For calculations refer drawing AGPB501A.
Two Return and Fill Stations	375 gallons x 2 = 750 gallons			
Tanker loading/ Unloading Area	7000* Gallons	same as above	same as above	7025 gallons
Truck storage	15 trucks (not to exceed the remaining volume available in the storage tank for unloading)	same as above	same as above	Secondary containment is inbuilt in the truck.

*	Volume of one truck

**	Total volume of part washer solvents and other liquids stored inside the secondary containment must not exceed 6000 gallons.

All plans, specifications and schedules required by the terms of this Permit and all subsequent amendments to those documents are incorporated by reference into this Permit, upon approval, when required, or acceptance by the Department, unless the Department specifically specifies otherwise in writing. Upon incorporation, the provisions of each such document will be binding upon the Permittee and have the same legal force and effect as the requirements of this Permit.

B. PERMIT APPLICATION

The Permittee=s Hazardous Waste **Part A** Permit Application is attached to and incorporated by reference into this Permit. The Permit Application documents listed below are also incorporated by reference into this Permit. These documents are made part of this Permit, are binding upon the Permittee and have the same legal force and effect as the requirements of this Permit.

Attachment	Application Attachment

Attachment	Application Attachment
I	Attachment I- Waste Analysis Plan
II	Attachment II - Inspection Plan
III	Attachment III- Personnel Training
IV	Attachment IV - Security Plan
V	Attachment V - Preparedness and Prevention
VI	Attachment VI - Contingency Plan
VII	Attachment VII - Closure Plan
VIII	Attachment VIII - Management of Waste in Containers
IX	Attachment IX - Management of Waste in Tank
X	Attachment X - Air Emission Standards
XI	Drawings, Part A-Application, Facility Description and supporting documents
M	Attachment M - Major/Minor Permit Modifications
XII	A CD containing the Applicable regulations 6 NYCRR Parts 370 through 373-2, 376 in effect on the date of final issuance of this Permit

Future modifications to this Permit, including modifications to the Permit Application documents incorporated into this Permit, shall be addressed according to 6NYCRR 373-1.7. The Permittee must submit copies to the Regional Permit Administrator and as required in Section H of this Module, of the replacement: pages, sections, and/or attachments to the permit application along with the application request for a permit modification. The Permittee shall place a revision date on all pages submitted as part of the proposed permit modification application.

In Attachment M of the permit, the Permittee must provide and maintain a log of all modifications made to this Permit, including modifications made to the Permit Application documents that are made part of this Permit. The log shall contain at a minimum the following information regarding an approved modification: (1) the name of the specific documents being modified (e.g., contingency plan, security requirements, hazardous waste unit operations, etc.); (2) the pertinent page, section, and/or attachment of this Permit and Permit Application documents subject to modification; (3) the revision date of the modifications; (4) a brief statement regarding the nature of the modifications; and (5) the effective date of the modification to this Permit. The Permittee shall place the log at the end of this Permit along with a copy of the Department=s approval letter/s, when applicable.

Upon receipt of a permit modification issued by the Department, the Permittee must update the log and replace the pages, sections, and/or attachments in the Permit and Permit Application with the modified pages, sections, and/or attachments in the permit copy maintained by the Permittee

C. GENERAL REQUIREMENTS FOR THIS PART 373 PERMIT

The Permittee must comply with 6NYCRR Subpart 373-1 as follows:

1. General 6NYCRR 373-1.1

a) 6NYCRR 373-1.1(b) - Applicability;
b) 6NYCRR 373-1.1(c) - Safeguarding Information;
c) 6NYCRR 373-1.1(f) - Uniform Procedures;
d) 6NYCRR 373-1.1(g) - Enforcement;
e) 6NYCRR 373-1.1(h) - Severability; and
f) 6NYCRR 373-1.1(i) - Terms Used.

2. Requirement for Permit 6NYCRR 373-1.2

6NYCRR 373-1.2(d) requires owners and operators of hazardous waste management facilities to have a Part 373 permit during the active life of a unit/s, including the closure period and during the post-closure care period, with few exceptions. See section D.7. of this permit below.

3. Signatories to Permit Applications and Reports 6NYCRR 373-1.4(a)(5)

a) 6NYCRR 373-1.4(a)(5)(i) - Applications;
b) 6NYCRR 373-1.4(a)(5)(ii) - Reports;
c) 6NYCRR 373-1.4(a)(5)(iii) - Changes to authorization; and
d) 6NYCRR 373-1.4(a)(5)(iv) - Certification.

4. Recordkeeping 6NYCRR 373-1.4(g)

5. Permit Conditions 6NYCRR 373-1.6

a) 6NYCRR 373-1.6(a) - Conditions applicable to all permits;
b) 6NYCRR 373-1.6(a)(1) - Duty to Comply;
c) 6NYCRR 373-1.6(a)(2) - Duty to reapply;
d) 6NYCRR 373-1.6(a)(3) - Need to halt or reduce activity not a defense;

e) 6NYCRR 373-1.6(a)(4) - Duty to mitigate;
f) 6NYCRR 373-1.6(a)(5) - Proper operation and maintenance;
g) 6NYCRR 373-1.6(a)(6) - Permit actions;
h) 6NYCRR 373-1.6(a)(7) - Property rights;
i) 6NYCRR 373-1.6(a)(8) - Duty to provide information;
j) 6NYCRR 373-1.6(a)(9)(i) through (iv) - Inspection and entry;
k) 6NYCRR 373-1.6(a)(10)(i) through (iii) - Monitoring and records;
l) 6NYCRR 373-1.6(a)(11) - Signatory Requirements;
m) 6NYCRR 373-1.6(a)(12)(i) through (xi) - Reporting requirements;
n) 6NYCRR 373-1.6(a)(13) - Information repository (if applicable)
o) 6NYCRR 373-1.6(c) - Establishing Permit conditions~~;~~
p) 6NYCRR 373-1.6(d)(1)(i) through (iii) - Schedules of compliance;

The Permittee must comply with all the special conditions of this permit.

q) 6NYCRR 373-1.6(d)(2)(i) through (iv) - Alternative schedules of compliance.

6. <u>Requirements for recording and reporting of monitoring results 6NYCRR 373-1.6(b)</u>

The Permittee must comply with the recording, reporting and monitoring requirements listed in this permit.

The Permittee must use, maintain the monitoring equipment and methods and report monitoring results as specified in this Permit (including the permit application) and 6NYCRR Subpart 373-2. The Permittee must conduct required monitoring with the type, intervals and frequency sufficient to yield data which are representative of the monitoring activity.

7. <u>Permit Modifications 6NYCRR 373-1.7</u>

a) 6NYCRR 373-1.7(a) - Transfer of Permits;
b) 6NYCRR 373-1.7(b) - Modification of permits;
c) 6NYCRR 373-1.7(c) - Minor modifications of RCRA delegated permits;
d) 6NYCRR 373-1.7(d) - Major Modifications;
e) 6NYCRR 373-1.7(e) - Announcement of Determinations;
f) 6NYCRR 373-1.7(f) - Temporary Authorizations; and
g) 6NYCRR 373-1.7(g) - Newly Regulated Wastes and Units.

8. <u>Expiration and Continuation of Permits 6NYCRR 373-1.8</u>

This permit shall be in effect for a fixed term not to exceed five years.

Complete applications for permit renewal must be submitted at least 180 days before the expiration date of this Permit pursuant to 6NYCRR 373-1.8(b) to the addresses in Section H of this Permit module below. Renewal applications with a significant change (as defined in paragraph 373-1.10(a)(1) of this Subpart) are subject to the requirements of section 373-1.10 of this Subpart for expanded public participation.

Prior to processing the renewal application the Department will determine whether the application is complete. In order for the renewal application to be complete the Permittee must:

a) Satisfy the general requirements for complete application contained in 6 NYCRR Part 621 (Uniform Procedure Regulations).

b) Include all information required, both general and specific to the type of the facility in accordance with the laws, regulations and analytical requirements in effect at the time (see 6 NYCRR 373-1.5).

At any time during the review of the renewal application the Department may request in writing any additional information which is necessary for determining the completeness of the application. Failure to provide such information by the date specified in the request may be grounds for denial of the application and the extension allowed pursuant to section 401.2. of the State Administrative Procedures Act.

Should the Permittee cease the hazardous waste management activities allowed by this Permit prior to the expiration of this Permit, then, the Permittee must continue to comply with the applicable corrective action conditions and requirements stipulated in this Permit (refer to Module II Corrective Action). In addition, the Permittee shall submit a renewal application pursuant to 6NYCRR Subpart 373-1.8(b) prior to this Permit=s expiration unless and until all the Permittee=s corrective action obligations have been completed. In the alternative, the Permittee may execute an order on consent for corrective action pursuant to Environmental Conservation Law (ECL) Section 71-2727(3) with the Commissioner at least 180 days prior to the expiration date of this Permit.

D. <u>FINAL STATUS STANDARDS FOR THIS PART 373 PERMIT</u>

The Permittee must comply with 6NYCRR Subpart 373-2, and the referenced sections of the Permit Application, as follows:

1. <u>General 6NYCRR 373-2.1</u>

a) 6NYCRR 373-2.1(a) - Purpose, Scope and Applicability; and
b) 6NYCRR 373-2.1(c) - Imminent Hazard Action.

2. General Facility Standards 6NYCRR 373-2.2

a) 6NYCRR 373-2.2(a) - Applicability;
b) 6NYCRR 373-2.2(b) - Facility ownership transfer;
c) 6NYCRR 373-2.2(d) - Required Notices;
d) 6NYCRR 373-2.2(e) - General Waste Analysis (Attachment I of the Permit);
e) 6NYCRR 373-2.2(f) - Security (Attachment IV of the Permit);
f) 6NYCRR 373-2.2(g) - General inspection requirements (Attachment II of the Permit);
g) 6NYCRR 373-2.2(h) - Personnel training (Attachment III of the Permit);

h) 6NYCRR 373-2.2(i) - General requirements for ignitable, reactive, or incompatible wastes (Attachment V of the Permit);
i) 6NYCRR 373-2.2(j) - Location standards (Attachment XI of the permit) and

3. Preparedness and Prevention 6NYCRR 373-2.3

The Permittee must comply with Attachment V of the Permit and 6NYCRR 373-2.3 as follows:

a) 6NYCRR 373-2.3(a) - Applicability;
b) 6NYCRR 373-2.3(b) - Design and operation of facility;
c) 6NYCRR 373-2.3(c) - Required equipment;
d) 6NYCRR 373-2.3(d) - Testing and maintenance of equipment;
e) 6NYCRR 373-2.3(e) - Access to communications or alarm system;
f) 6NYCRR 373-2.3(f) - Required aisle space; and
g) 6NYCRR 373-2.3(g) - Arrangements with local authorities.

4. Contingency Plan and Emergency Procedures 6NYCRR 373-2.4

The Permittee must comply with Attachment VI of the Permit and 6NYCRR 373-2.4 as follows:

a) 6NYCRR 373-2.4(a) - Applicability;
b) 6NYCRR 373-2.4(b) - Purpose and implementation of contingency plan;
c) 6NYCRR 373-2.4(c) - Content of contingency plan;
d) 6NYCRR 373-2.4(d) - Copies of contingency plan;
e) 6NYCRR 373-2.4(e) - Amendment of contingency plan;
f) 6NYCRR 373-2.4(f) - Emergency coordinator; and
g) 6NYCRR 373-2.4(g) - Emergency Procedures.

5. Manifest System, Recordkeeping and Reporting 6NYCRR 373-2.5

a) 6NYCRR 373-2.5(a) - Applicability;
b) 6NYCRR 373-2.5(b) - Manifest requirements;
c) 6NYCRR 373-2.5(c) - Operating record;
d) 6NYCRR 373-2.5(d) - Availability, retention, and disposition of records;
e) 6NYCRR 373-2.5(e) - Annual report;
f) 6NYCRR 373-2.5(f) - Unmanifested waste report; and
g) 6NYCRR 373-2.5(g) - Additional reports.

The Permittee must retain for inspection by the Department the permit modification log required by Section B, the operating record, documentation to demonstrate compliance with the financial requirements of this Permit, the referenced sections of the Permit Application that are made part of this Permit, and any subsequent Department approved changes to the contents of that Application.

These documents include, but are not limited to, the most recent Department approved: waste analysis plan; contingency plan; closure plan(s); contingent post-closure plan(s); groundwater monitoring plan(s); security, inspection, and personnel training requirements; and final engineering documents for all hazardous waste treatment, storage, and disposal units subject to this Permit and for all ongoing corrective action remedies pertinent to solid waste management units and areas of concern either remediated or being remediated pursuant to this Permit.

6. Releases from Solid Waste Management Units 6NYCRR 373-2.6

The Permittee must comply with all the applicable provisions stipulated in 6NYCRR 373-2.6(a) through (k) for Aregulated units@ and with 6NYCRR 373-2.6 (l) for corrective action at solid waste management units; comply with the conditions stipulated in Module II - Corrective Action Requirements for Solid Waste Management Units and Areas of Concern.

7. Closure and Post-Closure 6NYCRR 373-2.7

The Permittee must comply with Attachment VII of the Permit and 6NYCRR 373-2.7 for the closure and post-closure care of the hazardous waste management unit(s), as follows:

a) 6NYCRR 373-2.7(a) - Applicability;
b) 6NYCRR 373-2.7(b) - Closure performance standard;
c) 6NYCRR 373-2.7(c) - Closure plan; amendment to plan;
d) 6NYCRR 373-2.7(d) - Closure; time allowed for closure;
e) 6NYCRR 373-2.7(e) - Disposal or decontamination of equipment, structures and soils;

f) 6NYCRR 373-2.7(f) - Certification of closure and if applicable survey plat;

8. Financial Requirements 6NYCRR 373-2.8

The Permittee must comply with Attachment VII of the Permit and 6NYCRR Subpart 373-2.8 for meeting the financial requirements for the closure cost estimate included in the Attachment VII and for corrective action when required as follows

a) 6NYCRR 373-2.7(a) - Applicability;
b) 6NYCRR 373-2.7(b) - Closure Performance Standard;
c) 6NYCRR 373-2.7(c) - Closure Plan; Amendment to Plan;
d) 6NYCRR 373-2.7(d) - Closure; Time Allowed for Closure;
e) 6NYCRR 373-2.7(e) - Disposal or Decontamination of Equipment, Structures and Soils;
f) 6 NYCRR 373-2.7(f) - Certification of Closure and, if applicable, Survey Plat.

If required at the time of closure:

g) 6NYCRR 373-2.7(g) - Post-Closure Care and Use of Property;
h) 6NYCRR 373-2.7(h) - Post-Closure Plan; Amendment of Plan;
i) 6NYCRR 373-2.7(i) - Post-Closure Notices; and
j) 6NYCRR 373-2.7(j) - Certification of Completion of Post-Closure Care.

The Permittee must update closure cost estimates annually, update financial assurance for same, record the changes in the operating record and submit to the Department to the addresses listed in Section H of this Permit module a written summary of the changes on or before the anniversary date of this Permit or per the required actions of Part 373-2.8(c)(2), which reads in part, AThe Permittee must adjust closure cost estimate for inflation within 60 days prior to the anniversary date of the financial instruments used. For owners and operators using the financial test or corporate guarantee., the closure cost estimate must be updated for inflation within 30 days after the close of the firm=s fiscal year and before submission of updated information to the commissioner as specified in section 373-2.8(d)(5)(iii) of this Part.@. Also, the Permittee must revise the closure cost estimate no later than 30 days after the commissioner has approved the request to modify the closure plan, if the change in the closure plan increased the cost of closure.

k) 6NYCRR 373-2.8(d) - Financial assurance for closure;
l) 6NYCRR 373-2.8(g) - Use of a mechanism for financial assurance of closure
m) 6NYCRR 373-2.8(h) - Liability requirements;
n) 6NYCRR 373-2.8(j) - Wording of the instruments;
o) 6 NYCRR 373-2.6(l) - Required Corrective Action for Solid Waste Management Units.

The Permittee must obtain approval in writing from the Department prior to the change, for any changes to the instrument/s and/or mechanism/s; e.g., type of instrument/s and/or mechanism/s, the issuing company/institution/s and/or a reduction in the dollar amount/s.

For commercial facilities, the Permittee must submit to the Department annually to the addresses listed in Section H of this Permit module, the dollar amount and inflation adjustment calculations for closure cost estimate within 30 days of the anniversary date of the establishment of the financial instrument used for providing financial assurance for closure cost estimate. Whenever the closure cost estimate increases, the Permittee must submit evidence to the commissioner of proportionate adjustments to the financial assurance for such increases.

The Permittee must obtain approval in writing from the Department prior to the change, for any changes to the instrument/s and/or mechanism/s; e.g., type of instrument/s and/or mechanism/s, the issuing company/institution/s and/or a reduction in the dollar amount/s.

For commercial facilities, the Permittee must submit to the Department annually to the addresses listed in Section H of this Permit module, the dollar amount and inflation adjustment calculations for closure cost estimate within 30 days of the anniversary date of the establishment of the financial instrument used for providing financial assurance for closure cost estimate.

Whenever the closure cost estimate increases the Permittee must obtain financial assurance to cover the increase.

9. Air Emission Standards 6NYCRR 373-2.27, 373-2.28 and 373-2.29

The Permittee must comply with Attachment X of the Permit Application and all applicable requirements of 6NYCRR 373-2.27, 373-2.28 and 373-2.29 as follows:

a) 6NYCRR 373-2.27 Air Emission Standards for Process Vents; and
b) 6NYCRR 373-2.28 Air Emission Standards for Equipment Leaks.
c) 6NYCRR 373-2.29 Air Emission Standards for Tanks, Surface Impoundments, and Containers.

E. LAND DISPOSAL RESTRICTIONS

The Permittee must comply with all applicable provisions in the current 6NYCRR Part 376 for the land disposal of hazardous waste except for hazardous waste generated by remediation or corrective action activities for placement in an on-site corrective action management unit (CAMU) approved by the Commissioner.

F. WASTE ANALYSIS AND QUALITY ASSURANCE

The Permittee must obtain representative samples of wastes and other materials to be analyzed pursuant to this Permit. The Permittee must perform the sampling and analysis required by this Permit in accordance with ATest Methods for Evaluating Solid Waste, Physical/Chemical Methods,@ EPA Publication SW-846 (Third Edition (November 1986), as amended by Updates: I (July 1992), II (September 1994), IIA (August 1993), IIB (January 1995), III (December 1996), and IIIA (April 1998), and later approved revisions), hereinafter referred to as ASW-846@; Appendix 19 of 6NYCRR Part 371; or an equivalent method approved by the Department.

The Permittee shall conduct a quality assurance program to ensure that the sampling, analysis and monitoring data are technically accurate and statistically valid. The quality assurance program must be in accordance with Chapter One and the requirements of applicable method(s) of SW-846, or an equivalent method approved by the Department.

As required by ECL 03-0119, any laboratory (Permittee or contract) used by the Permittee to perform analysis pursuant to this Permit must be certified by the New York State Department of Health Environmental Laboratory Approval Program (ELAP) in the appropriate categories of analysis, if ELAP issues certifications in such categories. If the Permittee uses a contract laboratory to perform analysis required by this Permit, then the Permittee shall inform the laboratory in writing that it must operate under the waste analysis and quality assurance provisions of this Permit.

G. ORAL REPORTS

The oral reports required by 6NYCRR 373-1.6(a)(12)(vi) and 373-2.4(g)(4)(ii) must be made to both the Department using the New York State 24 - hour oil and hazardous material spill notification number (800) 457-7362 and the National Response Center using its 24-hour number (800) 424-8802, or any designated telephone numbers which may subsequently replace those listed above.

Note: Any spill that contains the AReportable Quantity,@ (RQ) for any of the hazardous substance listed in 6NYCRR Part 597.2, must be reported to the Department within 24 hours of discovery per 6NYCRR Part 595.3. If a release has been reported pursuant to 6NYCRR Part 595.3, that would satisfy the above requirement for an oral report to the Department.

H. PLANS, REPORTS, SPECIFICATIONS, IMPLEMENTATION, RENEWAL AND MODIFICATION APPLICATIONS, AND OTHER SUBMITTALS

1. All submittals required by the Permit must be submitted to the addresses listed below.

a) One (1) copy of all submittals to both:

Regional Solid & Hazardous Materials Engineer
New York State Department of Environmental Conservation
Region 7, 615 Erie Blvd West
Syracuse NY 13204

and

Chief, RCRA Programs Branch
Division of Environmental Planning and Protection
U.S. Environmental Protection Agency, Region II
290 Broadway [22nd floor]
New York, NY 10007-1866

b) Two (2) copies to:

Director, Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233-7258

This includes all submittals pertaining to the permitted hazardous waste management units and all corrective action documents and groundwater monitoring plans, if applicable.

c) One (1) copy of all submittals pertaining to the waste reduction requirements of Section I must be submitted to:

Director, Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233-7258

d) One copy of Application to renew or modify this Permit must be submitted to the following, in addition to the above addresses:

Regional Permit Administrator
New York State Department of Environmental Conservation,
Division of Environmental Permits,

615 Erie Boulevard West,
Syracuse, NY 13204-2499.

2. The Permittee shall submit plans, reports, specifications, implementation schedules and any subsequent amendments required by this Permit to the Department for review and comment. If the Department determines that any plan, report, specification, schedule or respective amendment required by this Permit is deficient either in whole or in part, the Permittee shall either promptly respond to the comments or make revisions to the submission consistent with the Department's comments. Within a reasonable time frame specified by the Department, a final plan, report, specification, schedule or respective amendment shall be submitted to the Department for approval. An extension of the due date for any submittal may be granted by the Department based on the Permittee's documentation that sufficient justification for the extension exists.

3. Submissions to the Department. All workplans; reports, including attachments and appendices, and certifications shall be submitted in print as well as in an electronic format acceptable to the Department.

Information on the format of data submissions can be found at:
http://www.dec.ny.gov/chemical/62440.html

Information on electronic document submissions can be found at:
http://www.dec.ny.gov/regulations/2586.html

I. WASTE REDUCTION REQUIREMENTS

The Permittee shall comply with the requirements of Article 27, Title 9, Section 27-0908 of the New York State Environmental Conservation Law. All reports and submittals required by Section 27-0908 to be submitted to the Commissioner shall be sent to the addresses specified in Section H above.

J. DEFINITIONS

For the purpose of this Permit, terms used herein shall have the same meaning as those in 6NYCRR 370 through 374 and 376 and the terms defined in this Permit, unless this Permit specifically states otherwise. Where terms are not otherwise defined, the meaning associated with such terms shall be as defined by a standard dictionary reference or the generally accepted scientific or industrial meaning of the term.

1. Action Levels. For purposes of this Permit, action levels are hazardous constituent

concentrations for a specific environmental medium which if exceeded indicate a potential threat to human health or the environment. The exceedance of action levels may trigger further investigations, studies, and corrective measures. Where available, action levels are based on appropriate promulgated standards established for a specific environmental medium. When promulgated standards are not available, action levels can be media-specific hazardous constituent concentrations derived from non-promulgated human health risk data or environmental risk data with the latter levels being protective of aquatic life or wildlife. An action level may be set at the background level for a hazardous constituent for which data are inadequate to set a human health or environmental health-based level.

2. Areas of Concern (AOC). Pursuant to the authority granted by 6NYCRR 373-1.6(c)(2), an area of concern has been defined for purposes of this Permit to mean an area at the facility, or an off-site area, which is not at this time known to be a solid waste management unit (SWMU), where hazardous waste and/or hazardous constituents are present, or are suspected to be present, as a result of a release from the facility. The term shall include areas of potential or suspected contamination as well as actual contamination. Such area(s) may require study and a determination of what, if any, corrective action may be necessary. All permit references to and conditions for SWMUs shall apply to areas of concern.

3. Environment. Pursuant to ECL Article 27, Title 9, Section 27-0901, environment means any water, water vapor, any land including land surface or subsurface, air, fish, wildlife, biota and all other natural resources.

4. Release. For purposes of this Permit, release includes, but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping or disposing into the environment of any hazardous waste, including hazardous constituents, unless expressly authorized under the terms of this Permit or otherwise permitted under law (e.g., SPDES permitted discharges).

5. Solid Waste Management Unit (SWMU). For purposes of this Permit, SWMU includes any discernible unit at which solid wastes have been placed at any time, irrespective of whether the unit was intended for the management of hazardous or solid wastes. Such units include any area at the facility at which solid wastes have been routinely and systematically released.

6. AAnnual@ or AYearly@ means Awithin 12 months of the date of the previous occurrence@.

7. @Semi- annual, biannual or every 6 months@ means Awithin six months from the date of the previous occurrence@.

8. AMonthly@ means Awithin 30 days from the date of the previous occurrence@.

9. AWeekly@ means Awithin 7 days of the previous occurrence@.

10. ATypically, normally, usually, in general or commonly@ means Awith very few justifiable exceptions.@ AOccasionally@ means "now and then, on occasion or rarely.@

MODULE II - CORRECTIVE ACTION REQUIREMENTS
FOR SOLID WASTE MANAGEMENT UNITS AND
AREAS OF CONCERN

A. APPLICABILITY

1. Statute and Regulations. Article 27, Title 9, Section 27-0913, and 6NYCRR 373-2.6(l) requires corrective action, including Corrective Action beyond the facility boundary where necessary to protect human health and the environment, for all releases of hazardous wastes, including hazardous constituents, from any solid waste management unit ("SWMU") at a storage, treatment or disposal facility seeking a 6NYCRR Part 373 permit, regardless of the time at which waste was placed in such unit. Pursuant to 6NYCRR 373-1.6(c)(2) the Commissioner may impose permit conditions as the Commissioner determines necessary to protect human health and the environment (i.e., Areas of Concern (AOC(s)).

2. Solid Waste Management Units and Areas of Concern. The conditions of this Module apply to:

   (a) All the SWMUs and AOCs listed in this Module individually or in combinations;

   (b) Any additional SWMU(s) and AOCs identified during the course of groundwater monitoring, field investigations, environmental audits or other means as described in Module Condition C. below; and

   (c) The following known SWMUs and AOCs located on-site and/or off-site:

TABLE II-1

Solid Waste Management Units:
1) Spent Mineral Spirits Storage Tank
2) Container Storage Area
3) Solvent Return and Fill Station

Areas of Concern:
1) Location of Soil Boring GT-3
2) Location of Soil Boring GT-10

B. STANDARD CONDITIONS FOR CORRECTIVE ACTION

1. Work Plans. All work plans submitted pursuant to this Module shall include:

(a) Quality Assurance/Quality Control protocols to ensure that data generated is valid and supported by documented procedures;

(b) Other plans, specifications and protocols, as applicable;

(c) A schedule for starting specific tasks, completing the work and submitting progress and final reports; and

(d) Plans for the treatment, storage, discharge or disposal of wastes to be generated by activities described therein.

2. Quality Assurance/Quality Control

(a) Any laboratory to be used pursuant to such work plans required by this Module must be approved by the Commissioner prior to work plan implementation. Certification by the New York State Department of Health Environmental Laboratory Approval Program in the relevant analytical services is required.

(b) The minimum Quality Assurance/Quality Control data and information, that shall be delivered with all sample analyses required by this Module, shall be in accordance with a Department approved QA/QC plan.

3. Health/Safety Plans. The Permittee shall develop, according to applicable Federal, State and local requirements, and submit to the Commissioner, health and safety plans that will be implemented to ensure that the health and safety of project personnel, plant personnel and the general public are protected. These plans are not subject to approval by the Commissioner.

4. Guidance Documents. When preparing the submissions described in this Permit Module, the Permittee shall take account of applicable guidance documents issued by the U.S. Environmental protection Agency and the New York State Department of Environmental Conservation in a manner reflecting reasonable technical considerations.

5. Prior Submittals. The Permittee may have already submitted portions of information, plans, or reports required by this Permit Module and its Appendices to the Commissioner pursuant to the terms of previous applications, consent orders, or plans. For those items the Permittee contends were submitted to the Commissioner, the Permittee may cite the specific document(s) and page(s) it believes adequately addresses each of the individual items requested by this Permit Module and its Appendices. The references, by document(s) and page(s), shall be placed in the appropriate sections of the submittals that require the referenced information and data. If the Commissioner, after a file search, determines that it does not possess any

of the referenced information, plans, or reports that the Permittee claims were previously submitted, the Commissioner will notify the Permittee and the Permittee shall submit the referenced documents within the time frame specified within the notification.

6. Compliance Schedule For Interim Corrective Measures.

(a) If at any time it is determined by the Commissioner that a release or, based on site-specific circumstances, a threatened release of hazardous wastes, including hazardous constituents from a SWMU, a combination of SWMUs, or an AOC poses a threat to human health or the environment, or that such condition jeopardizes the Permittee's ability to comply with any governmental permit, a draft interim corrective measures study shall be submitted to the Commissioner for approval within thirty (30) calendar days of notice of such a determination. This study shall consider, among other relevant factors, the character, the extent, direction, the rate of release, the proximity to population, the exposure pathways, the effects of delayed action, and the evaluations of appropriate interim corrective measures. Upon approval of the study by the Commissioner, the Permittee shall implement the required interim corrective measures as specified by the Commissioner. Nothing herein shall preclude the Permittee from taking immediate action to address the conditions described herein and promptly notifying the Commissioner.

(b) In the event the Permittee discovers, a release or, based on site-specific circumstances, a threatened release of hazardous waste, including hazardous constituents, from a SWMU, or a combination of SWMUs, that poses a threat to human health or the environment, the Permittee shall identify interim corrective measures to mitigate this threat. The Permittee shall immediately summarize the nature and magnitude of the actual or potential threat and nature of the interim measures being considered and notify the Commissioner. Within thirty (30) calendar days of notifying the Commissioner, the Permittee shall submit to the Commissioner, for approval, an interim corrective measures work plan for the interim measures. The Permittee shall implement the measures specified by the Commissioner. Nothing herein shall preclude the Permittee from taking immediate action to address the conditions described herein and promptly notifying the Commissioner.

(c) The following factors may be considered by the Commissioner or the Permittee in determining the need for interim corrective measures:

(i) Time required to develop and implement a final corrective measure;

(ii) Actual and potential exposure of human and environmental receptors;

(iii) Actual and potential contamination of drinking water supplies and sensitive ecosystems;

(iv) The potential for further degradation of any impacted medium;

(v) Presence of hazardous waste, including hazardous constituents, in containers that may pose a threat of release;

(vi) Presence and concentration of hazardous waste, including hazardous constituents, in soils that have the potential to migrate to groundwater or surface water;

(vii) Weather conditions that may affect the current levels of contamination;

(viii) Risks of fire, explosion, or potential for exposure to hazardous wastes, including hazardous constituents, as a result of an accident or failure of container or handling system; and

(ix) Other situations that may pose threats to human health and the environment.

7. Determination of No Further Action.

(a) Based on the results of an RFI for a particular SWMU, or combination of SWMUs, and/or AOC, and other relevant information, the Permittee may submit an application to the Commissioner for a permit modification under 6NYCRR 373-1.7(b) and 621.13 to terminate the subsequent corrective action requirements of this Module. This permit modification application must contain information demonstrating no release(s) of hazardous wastes, including hazardous constituents, from the SWMU(s) and/or AOC(s) that pose a threat to human health or the environment, as well as information required in 6NYCRR 373-1 and 621.4(n), which incorporates by reference 6NYCRR 373-1 and 373-2.

If, based upon review of the Permittee's request for a permit modification, the results of the RFI, and other information, including comments received during the forty-five (45) calendar day public comment period required for permit modifications, the Commissioner determines that the release(s) or the suspected release(s) investigated either are non-existent or do not pose a threat to human health or the environment, the Commissioner may grant the requested modification.

(b) A determination of no further action shall not preclude the Commissioner from implementing the following actions:

(i) Modifying this Permit at a later date to require the Permittee to perform such investigations as necessary to comply with the requirements of this Permit Module and its Appendices if new information or subsequent analysis indicates that there are, or are likely to be, releases from SWMUs/AOCs that may pose a threat to human health or the environment; and

(ii) Requiring continual or periodic monitoring of air, soil, groundwater, or surface water/sediment or subsurface gas, if necessary, to protect human health and the environment, when site-specific circumstances indicate the release(s) of hazardous waste, including hazardous constituents, are likely to occur from any SWMU(s) and/or AOC(s).

8. Compliance Schedule For Reporting.

(a) The Permittee shall submit, to the Commissioner, signed progress reports, as specified in approved work plans pursuant to this Permit, of all activities (i.e., SWMU Assessment, Interim Measures, RCRA Facility Investigation, Corrective Measures Study) conducted pursuant to the provisions of the Corrective Action Compliance Schedules of this Permit Module, beginning no later than thirty (30) calendar days after the Permittee is first required to begin implementation of any requirement herein. These reports shall contain:

(i) A description of the work completed during the reporting periods

(ii) Summaries of all findings made during the reporting period, including summaries of laboratory data;

(iii) Summaries of all changes made during the reporting period;

(iv) Summaries of all contacts made with representatives of the local community and public interest groups during the reporting period;

(v) Summaries of all problems or potential problems encountered during the reporting period and actions taken to rectify problems;

(vi) Changes in personnel conducting or managing the corrective action activities during the reporting period;

(vii) Projected work for the next reporting period; and

(viii) Copies of daily reports, inspection reports, laboratory/monitoring data, etc., generated during the reporting period.

(b) Upon request, copies of other relevant reports and data not identified in Module Condition B.8.(a) shall be made available to the Commissioner.

(c) The Commissioner may require the Permittee to conduct new or more extensive assessments, investigations, or studies, based upon information provided in the progress reports referred to in Module Condition B.8(a) above, or upon other supporting information.

(d) All plans and schedules required by the conditions of this Permit Module are upon approval of the Commissioner, incorporated into this Permit by reference and become an enforceable part of this Permit. Any noncompliance with such approved plans and schedules shall constitute noncompliance with this Permit. Extensions of the due dates for submittals may be granted by the Commissioner in accordance with the permit modification processes stipulated in Module Condition E.13. of this Permit Module.

9. Compliance with Governmental Requirements. During investigative activities, interim corrective measures, and final corrective measures, (including, but not limited to, equipment decommissioning, excavation and unit demolition) required under this Module, the Permittee shall ensure that the transportation, treatment, storage, discharge, and disposal of all contaminated materials generated as a result of such activities (including, but not limited to, soils, sediments, liquids, tanks, pipes, pumps, rubble, debris, and structural materials) are performed in an environmentally sound manner pursuant to all applicable Federal, State and local requirements and that is protective of public health and the environment. Nothing in this Module shall be construed to require the Permittee to proceed in a manner which is in violation of any such requirements.

10. Notifications.

(a) Notification of groundwater contamination. If at any time the Permittee discovers that hazardous constituents in groundwater that may have been released from a solid waste management unit or area of concern at the facility have migrated beyond the facility boundary in concentrations that exceed action levels, the Permittee shall, within fifteen (15) calendar days of discovery, provide written notice to the Commissioner and any person who owns or resides on the land which overlies the contaminated groundwater.

(b) Notification of air contamination. If at any time the Permittee discovers that hazardous constituents in air that may have been released from a solid waste management unit or area of concern at the facility have or are migrating to areas beyond the facility boundary in concentrations that exceed action levels, and that residences or other places at which continuous, long-term exposure to such constituents might occur are located within such areas, the Permittee shall, within fifteen (15) calendar days of such discovery;

(i) Provide written notification to the Commissioner, and

(ii) Initiate any actions that may be necessary to provide notice to all individuals who have or may have been subject to such exposure.

(c) Notification of residual contamination. If hazardous wastes or hazardous constituents in solid waste management units or areas of concern, or which have been released from solid waste management units or areas of concern, will remain in or on the land, including groundwater, after the term of the permit has expired, the Commissioner may require the Permittee to record, in accordance with State law, a notation in the deed to the facility property or in some other instrument which is normally examined during title search that will, in perpetuity, notify any potential purchaser of the property of the types, concentrations, and locations of such hazardous wastes or hazardous constituents. The Commissioner may require such notice as part of the corrective measures selection process.

C. COMPLIANCE SCHEDULE FOR ASSESSMENT OF NEWLY IDENTIFIED SWMUS AND AOCS.

1. Notification of Assessment. The Permittee shall notify the Commissioner, in writing, of any additional SWMU(s) and/or AOC(s) not listed in this Module, which are identified during the course of groundwater monitoring, field investigations, environmental audits, or other means within fifteen (15) calendar days after discovery.

2. SWMU/AOC Assessment Report. Within thirty (30) calendar days after notifying the Commissioner, the Permittee shall submit a SWMU/AOC Assessment Report. This Report must provide, at a minimum, the following information for each newly identified SWMU/AOC:

(a) Type of unit/area;

(b) Location of each unit/area on a topographic map of appropriate scale;

(c) Dimensions, capacities, and structural descriptions of the unit/area (supply available engineering drawings);

(d) Function of unit/area;

(e) Dates that the unit/area was operated;

(f) Description of the wastes that were placed or spilled at the unit/area;

(g) Description of any known releases from the unit/area (to include groundwater data, soil analyses, air monitoring data, and/or surface water/sediment data);

(h) The results of any sampling and analysis required for the purpose of determining whether releases of hazardous wastes, including hazardous constituents, have occurred, are occurring, or are likely to occur from the unit/area; and

(i) Whether this unit/areas, individually or in combination with other units/areas described in Module Condition A.2. is a significant source of contaminant release.

3. SWMU/AOC Sampling and Analysis Plan. Within thirty (30) calendar days after submittal of the SWMU/AOC Assessment Report required in Module Condition C.2., the Permittee shall submit to the Commissioner for approval a Plan in accordance with the most recent version of the NYS RCRA Quality Assurance Project Plan Guidance, for any sampling and analysis of groundwater, land surface and subsurface strata, surface water/sediment or air, as necessary to determine whether a release of hazardous waste, including hazardous constituents, from such unit(s) and/or area(s) has occurred, is likely to have occurred, or is likely to occur. The SWMU/AOC Sampling and Analysis Plan must demonstrate that the sampling and analyses program, if applicable, is capable of yielding representative samples and must include parameters sufficient to identify migration of hazardous waste, including hazardous constituents, from the newly-discovered SWMU(s) and/or AOC(s) to the environment.

4. Subsequent Assessment Actions. Following submission of the SWMU/AOC Assessment Sampling and Analysis Plan set forth in Module Condition C.3., subsequent activities for the Plan shall proceed in accordance with the following schedule:

(a) Meeting between the Permittee, the U.S. Environmental Protection Agency (Agency) and the New York State Department of Environmental Conservation (Department) to discuss Plan comments, as appropriate; and

(b) Submission of a revised Plan to the Commissioner for approval within thirty (30) calendar days of the above-described meeting. (If the above referenced meeting is determined not to be necessary, the Permittee shall submit a revised Plan to the Commissioner, according to a schedule specified by the Department, not to exceed forty-five (45) calendar days after Permittee's receipt of Plan comments from the Commissioner); and

(c) Begin implementation of the SWMU/AOC Sampling and Analysis Plan within thirty (30) calendar days following written approval from the Commissioner for the Plan.

5. SWMU/AOC Sampling and Analysis Report. Within thirty (30) calendar days of receipt by the Permittee of validated analytical data generated under the approved SWMU/AOC Sampling and Analysis Plan, the Permittee shall follow reporting requirements in the approved Plan and submit a SWMU/AOC Sampling and Analysis Report to the Commissioner. The Report shall describe all results obtained from the implementation of the approved Plan.

6. Assessment Conclusions. Based on the results of the SWMU/AOC Sampling and Analysis Report, the Commissioner shall determine the need for further investigations at the specific unit(s) covered in the SWMU/AOC Assessment Report. If the Commissioner determines that such investigations are needed, the Commissioner shall, by written notification, require the Permittee to prepare and submit for approval a RCRA Facility Investigation Work Plan in accordance with Module Condition E.5. et. seq..

D. COMPLIANCE SCHEDULE AND NOTIFICATION REQUIREMENTS FOR NEWLY-DISCOVERED RELEASES AT SWMUS AND AOCS.

The Permittee shall notify the Commissioner, in writing, of any release(s) of hazardous wastes, including hazardous constituents, discovered during the course of groundwater monitoring, field investigation, environmental auditing, or other activities no later than fifteen (15) calendar days after discovery. Such newly-discovered release(s) may be from the newly-identified unit(s)/area(s), from the unit(s)/area(s) for which, based on the findings of the RFA, the Commissioner had previously determined that no further investigation was necessary, or from the unit(s)/area(s) investigated as part of an RFI. Based on the information provided in the notification, the Commissioner shall determine the need for further investigation of the release(s). If the Commissioner determines that such investigations are needed, the Commissioner shall, by written notification, require the Permittee to prepare a RCRA Facility Investigation Work Plan in accordance with Module Condition E.5. et. seq..

E. CORRECTIVE ACTION REQUIREMENTS.

1. No Action Requirement.

   (a) On the basis of the RCRA Facility Assessment-Preliminary Review Report dated Janurary 1991 and the Sampling Visit Work Plan Report dated April 1994, the Commissioner has determined that there is no evidence at this time of the release(s) of hazardous waste(s) and/or constituent(s) that threaten human health or the environment from the following SWMU(s) and/or AOC(s) identified in Module Condition A.2:

Solid Waste Management Units:
Spent Mineral Spirits Storage Tank
Container Storage Area
Solvent Return and Fill Station

Areas of Concern:
Location of Soil Boring GT-3
Location of Soil Boring GT-10

(b) The Permittee need not undertake corrective action at any aforementioned SWMU(s) and/or AOC(s) identified in Module Condition E.1.(a) as long as there is no evidence of the release(s) of hazardous waste(s) or constituent(s) from the SWMU(s) and/or AOC(s) threatening human health or the environment. This permit condition does not apply to any other stipulation specified in other Modules or Conditions of this Permit.

(c) A determination of no further action shall not preclude the Commissioner from modifying this Permit at a later date to require further investigations, studies, monitoring, or corrective measures, if new information or subsequent analysis indicates the release(s) or likelihood of release(s) from SWMU(s) and/or AOC(s) identified in Module Condition E.1.(a) that could pose a threat to human health or the environment.

5. Compliance Schedule For RCRA Facility Investigation ("RFI") Work Plan.

(a) The Permittee shall submit to the Commissioner for approval a Work Plan for SWMU(s) and/or AOC(s) identified pursuant to Module Condition C.6. no later than one-hundred and eighty (180) calendar days prior to the date when the SWMU(s) and/or AOC(s) become accessible for such an investigation. The RFI Work Plan shall be prepared in accordance with the provisions of Module Conditions E.5.(b)(i) through (iv). Accessibility to the SWMU(s) and/or AOC(s) shall be considered achievable when the impediment to the RFI (e.g. building, utilities) is demolished, abandoned, or to be altered in a manner that would allow access to the SWMU(s) and/or AOC(s).

(b) Permittee shall submit for approval a Work Plan to the Commissioner to address those units, releases of hazardous waste, including hazardous constituents, and media of concern which require the further investigations. A RFI Work Plan shall be submitted within ninety (90) calendar days after written notification by the Commissioner that an RFI is required pursuant to Module Conditions C.6., and/or D..

(i) The Work Plan shall describe the objectives of the investigation and the overall technical and analytical approach to completing all actions necessary to characterize the nature, direction, rate, movement, and concentration of releases of hazardous waste, including hazardous constituents, from specific units or groups of units and areas, and their actual or potential receptors. The Work Plan shall detail all proposed activities and procedures to be conducted at the facility and/or off-site, the schedule for implementing and completing such investigations, the qualifications of personnel performing or directing the investigations, including contractor personnel, and the overall management of the RFI.

(ii) The Work Plan shall discuss sampling and data collection quality assurance and data management procedures, including formats for documenting and tracking data and other results of investigations, and health and safety procedures.

(iii) The Permittee shall request, within thirty (30) calendar days of the effective date of this Permit, and/or within thirty (30) calendar days of any notification by the Commissioner that an RFI is required that the Commissioner review for approval the Permittee's determination. At the time of the request, the Permittee must provide the following information: (1) description of the items and/or summary of findings; (2) description of investigations addressing the items, documents/reports of the investigations with dates, and summary of the findings; and (3) copies of the documents/reports.

Upon the Commissioner's approval of any previously performed items, the Permittee may delete these from the RFI Work Plan. However, upon disapproval of items, all activities necessary for the items must be included in the RFI Work Plan.

(c) Following submission of the RFI Work Plan set forth in Module Condition E.5.(b), subsequent activities for the Plan shall proceed in accordance with the following schedule:

(i) Meeting between the Permittee and the Department to discuss Plan comments, as appropriate; and

(ii) Submission of a revised Plan to the Commissioner for approval within thirty (30) calendar days of the above-described meeting. (If the above-referenced meeting is determined not to be necessary, the Permittee shall submit a revised Plan to the Commissioner, according to a schedule specified by the Department, not to exceed forty-five (45) calendar days after Permittee's receipt of Plan comments from the Commissioner).

(d) The Commissioner shall review, for approval as part of the RFI Work Plan, any plans developed pursuant to Module Condition C.6, addressing further investigations of newly-identified SWMUs and/or AOCs, or Module Condition D, addressing newly discovered releases from units and/or areas. The Commissioner shall modify the Compliance Schedule of this Permit Module according to the permit modification procedures stipulated in Module Condition E.13. of this Permit Module to incorporate these units and areas and releases into the RFI Work Plan.

6. Compliance Schedule For RCRA Facility Investigation Work Plan Implementation
No later than thirty (30) calendar days after written notification by the Commissioner approving the RFI Work Plan, the Permittee shall begin implementation of the RFI according to the schedules specified in the RFI Work Plan. The RFI shall be conducted in accordance with the approved RFI Work Plan.

7. Compliance Schedule For RCRA Facility Investigation Final Report And Summary Report

(a) Within sixty (60) calendar days of receipt by the Permittee of validated analytical data generated under the approved RFI Work Plan, the Permittee shall submit to the Commissioner for approval the RFI Final and Summary Reports. The RFI Final Report must contain adequate information to support further corrective action decisions at the facility and/or off-site, should such actions be necessary. The RFI Final Report shall describe the procedures, methods, and results of all facility investigations of SWMUs and AOCs and their releases, including information on the type and extent of contamination at the facility and/or off-site, sources and migration pathways, and actual or potential receptors. It shall present all information gathered under the approved RFI Work Plan. The RFI final report will include a comparison of media specific hazardous constituents with their corresponding action levels. The Summary Report shall describe more briefly the procedures, methods, and results of the RFI.

(b) Following submission of the Reports set forth in Module Condition E.7.(a), subsequent activities for the Report shall proceed in accordance with the following schedule:

(i) Meeting between the Permittee and the Department to discuss Report comments, as appropriate; and

(ii) Submission of a revised Report to the Commissioner for approval within forty-five (45) calendar days of the above-described meeting. (If the above-referenced meeting is determined not to be necessary, the Permittee shall submit a revised Report to the Commissioner, according to a schedule specified by the Department, not to exceed forty-five (45) calendar days after Permittee's receipt of Report comments from the Commissioner).

(c) After the Commissioner approves the RFI Final Report and Summary Report, the Permittee shall mail the approved Summary Report to all individuals on the facility mailing list established by the Permittee, within thirty (30) calendar days of receipt of approval.

8. Compliance Schedule For Corrective Measures Study ("CMS") Scope of Work.

(a) Should a CMS be required, the Commissioner shall notify the Permittee in writing. This notice shall identify the hazardous constituent(s) which have exceeded the action level(s) as well as those which have been determined to threaten human health and the environment given site-specific exposure conditions or due to additive exposure risk. The notification shall specify target cleanup levels for hazardous constituents detected in each medium of concern, and may also specify corrective measure alternatives to be evaluated by the Permittee during the CMS.

(b) The Commissioner may require a Corrective Measures Study ("CMS") under the following conditions:

(i) If the concentrations of hazardous constituents in groundwater, surface water/sediment, soil, or air exceed their corresponding individual action levels; or

(ii) If the concentrations of hazardous constituents in groundwater, surface water/sediment, soil, or air do not exceed their corresponding individual action levels, but additive exposure risk due to the presence of multiple constituents is not protective of human health; or

(iii) If the concentrations of hazardous constituent in groundwater, surface water/sediment, soil, or air do not exceed corresponding individual action levels, but still pose a threat to human health or the environment, given site-specific exposure conditions.

(c) The Permittee shall submit for approval a CMS Plan to the Commissioner within sixty (60) calendar days after a notification required by Module Condition E.8.(a).

(i) The CMS Plan shall provide:

(1) A description of the general approach to investigating and evaluating potential corrective measure;

(2) A definition of the overall objectives of the study;

(3) The specific plans for evaluating corrective measure to ensure compliance with corrective measure standards;

(4) The schedules for conducting the study; and

(5) The proposed format for the presentation of information.

(d) Following submission of the CMS Plan set forth in Module Condition E.8.(c), subsequent activities for the Plan shall proceed in accordance with the following schedule:

(i) Meeting between the Permittee and the Department to discuss Plan comments, as appropriate; and

(ii) Submission of a revised Plan to the Commissioner for approval within thirty (30) calendar days of the above-described meeting. (If the above-referenced meeting is determined not to be necessary, the Permittee shall submit a revised Plan to the Commissioner, according to a schedule specified by the Department, not to exceed forty-five (45) calendar days after Permittee's receipt of Plan comments from the Commissioner).

9. Compliance Schedule For Corrective Measures Study Implementation. No later than thirty (30) calendar days after the Permittee has received written approval from the Commissioner for the CMS Plan, the Permittee shall begin to implement the CMS according to the schedules specified in the CMS Plan. The CMS shall be conducted in accordance with the approved Plan submitted pursuant to Module Condition E.8..

10. Compliance Schedule For Corrective Measures Study Final Report.

(a) Within forty-five (45) calendar days after the completion of the CMS, the Permittee shall submit for approval a CMS Final Report to the Commissioner. The CMS Final Report shall:

(i) Summarize the results of the investigations and, if applicable, of any bench-scale or pilot tests conducted;

(ii) Provide a detailed description of the corrective measures evaluated and include an evaluation of how each corrective measure alternative meets the standards set forth in Module Condition E.12(a).

(iii) Present all information gathered under the approved CMS Plan; and

(iv) Contain any additional information to support the Commissioner in the corrective measure selection decision-making process, described under Module Condition E.12.

(b) Following submission of the CMS Report set forth in Module Condition E.10(a), subsequent activities for the Report shall proceed in accordance with the following schedule:

(i) Meeting between the Permittee and the Department to discuss the Report comments, as appropriate; and

(ii) Submission of a revised Report to the Commissioner for approval within thirty (30) calendar days of the above-described meeting. (If the above referenced meeting is determined not to be necessary the Permittee shall submit a revised Report to the Commissioner, according to a schedule specified by the Department, not to exceed forty-five (45) calendar days after Permittee's receipt of Report comments from the Commissioner.)

(c) As specified under Module Condition E.8.(a), based on preliminary results and the CMS Final Report, the Commissioner may require the Permittee to evaluate additional corrective measures or particular elements of one or more proposed corrective measures.

11. Corrective Measure(s) Selection.

(a) Based on the results of the documents submitted under Module Condition E.7. for the RFI, under Module Condition E.10. for the CMS, and any further evaluations of additional corrective measures under this study, the Commissioner shall select the corrective measure(s) that at a minimum will meet the following standards:

(i) Be protective of human health and the environment;

(ii) Attain media cleanup standards selected by the Commissioner during the corrective measures selection process;

(iii) Control the source(s) of release(s) so as to reduce or eliminate, to the maximum extent practicable, further releases of hazardous waste, including hazardous constituents, that might pose a threat to human health and the environment; and

(iv) Meet all applicable waste management requirements.

(b) In selecting the corrective measure(s) which meets the standards for corrective measures established under Module Condition E.11.(a), the

Commissioner shall consider the following evaluation factors, as appropriate:

(i) Long-term reliability and effectiveness. Any potential corrective measure(s) may be assessed for the long-term reliability and effectiveness it affords, along with the degree of certainty that the corrective measure(s) will prove successful. Factors that shall be considered in this evaluation include:

(1) Magnitude of residual risks in terms of amounts and concentrations of hazardous waste, including hazardous constituents, remaining following implementation of the corrective measure(s), considering the persistence, toxicity, mobility and propensity to bioaccumulate of such hazardous wastes, including hazardous constituents:

(2) The type and degree of long-term management required, including monitoring and operation and maintenance;

(3) Potential for exposure of humans and environmental receptors to remaining hazardous wastes, including hazardous constituents, considering the potential threat to human health and the environment associated with excavation, transportation, redisposal or containment;

(4) Long-term reliability of the engineering and institutional controls, including uncertainties associated with land disposal of untreated hazardous wastes, including hazardous constituents, and their residuals; and

(5) Potential need for replacement of the corrective measure(s).

(ii) Reduction of toxicity, mobility or volume. A potential corrective measure(s) may be assessed as to the degree to which it employs treatment that reduces toxicity, mobility or volume of hazardous wastes, including hazardous constituents. Factors that shall be considered in such assessments include:

(1) The treatment processes the corrective measure(s) employs and materials it would treat;

(2) The amount of hazardous wastes, including hazardous constituents, that would be destroyed or treated;

(3) The degree to which the treatment is irreversible;

(4) The residuals that will remain following treatment, considering the persistence, toxicity, mobility and propensity to bioaccumulate of such hazardous wastes, including hazardous constituents; and

(5) All concentration levels of hazardous waste, including hazardous constituents, in each medium that the corrective measure(s) must achieve to be protective of human health and the environment.

(iii) The short-term effectiveness of a potential corrective measure(s) may be assessed considering the following:

(1) Magnitude of reduction of existing risks;

(2) Short-term risks that might be posed to the community, workers, or the environment during implementation of such a corrective measure(s), including potential threats to human health and the environment associated with excavation, transportation, and redisposal or containment; and

(3) Time until full protection is achieved.

(iv) Implementability. The ease or difficulty of implementing a potential corrective measure(s) may be assessed by considering the following types of factors:

(1) Degree of difficulty associated with constructing the technology;

(2) Expected operational reliability of the technologies;

(3) Need to coordinate with and obtain necessary approvals and permits from other agencies;

(4) Availability of necessary equipment and specialists;

(5) Available capacity and location of needed treatment, storage and disposal services; and

(6) Requirements for removal, decontamination, closure, or post-closure of units, equipment, devices or structures that will be used to implement the corrective measure(s).

(v) Cost. The types of costs that may be assessed include the following:

(1) Capital costs;

(2) Operation and maintenance costs;

(3) Net present value of capital and operation and maintenance costs; and

(4) Potential future corrective measure costs.

12. Permit Modification for Corrective Measure(s).

(a) Based on information the Permittee submits in the RFI and Summary Reports, under Module Condition E.7, the CMS Final Report under Module Condition E.10., and other information, the Commissioner will select the corrective measure(s) and initiate a permit modification to this Permit, pursuant to 6NYCRR 373-1.7(b) and 6NYCRR 621.14. The modification will specify the selected corrective measure(s) and include, at a minimum the following:

(i) Description of all technical features of the corrective measure(s) that are necessary for achieving the standards for corrective measures established under Module Condition E.11.(a), including length of time for which compliance must be demonstrated at specified points of compliance;

(ii) All media cleanup standards for hazardous constituents, selected by the Commissioner, that the corrective measure(s) must achieve to be protective of human health and the environment;

(iii) All requirements for achieving compliance with these cleanup standards;

(iv) All requirements for complying with the standards for management of wastes;

(v) Requirements for removal, decontamination, closure or post-closure of units, equipment, devices or structures that will be used to implement the corrective measure(s);

(vi) A schedule for initiating and completing all major technical features and milestones of the corrective measure(s); and

(vii) Requirements for submission of reports and other information.

(b) Within thirty (30) calendar days after this Permit has been modified, the Permittee shall demonstrate in writing to the Commissioner financial assurance for completing the approved corrective measures.

13. Modification of the Compliance Schedules.

(a) If at any time the Permittee determines that modification of any Compliance Schedule of this Permit Module is necessary because such schedules cannot be met, the Permittee must:

(i) Notify the Commissioner in writing within fifteen (15) calendar days of such determination; and

(ii) Provide an explanation why the current schedule cannot be met.

(b) The Commissioner shall notify the Permittee in writing of the final decision regarding the Permittee's proposed modification to the Compliance Schedule.

(c) Modifications to the Compliance Schedule pursuant to their procedure does not constitute a reissuance of this Permit.

(d) All other modifications to this Permit Module must be made in accordance with Module I, Condition I , of this Permit.

PART 373 PERMIT
MODULE III - STORAGE IN CONTAINERS

A. AUTHORIZED STORAGE AREA, WASTE TYPES AND STORAGE VOLUME.

The Permittee is authorized to operate the following container storage areas at the facility and store the following wastes in containers in these areas up to the volumes listed, subject to the terms of this Permit:

STORAGE AREA	WASTE TYPE	WASTE CODES	CONTAINER SPECIFICATIONS*	QUANTITY**
Storage Area in Return & Fill Station	SK Solvents (Hydrocarbon- and Aqueous-Based)	D001, D004-D011, D018, D019, D021-D030, D032-D043, non-hazardous	UN 1A2(steel) UN 1A2(Steel) UN 3H1 (Plastic)	2400 gallons (Eighty 30 gallon drums)
Truck storage (Secondary containment is inbuilt in the truck.)	15 trucks	same as above	same as above	Total volume of waste in trucks not to exceed the remaining volume available in the storage tank for unloading.

* For the purposes of calculating the volume of waste in a storage area under this permit, all containers in the area shall be considered as full.

The Permittee must comply with 6NYCRR 373-2.9 as cited below and with the applicable Attachments of the Permit.

B. CONTAINMENT 6NYCRR 373-2.9(f)

Container storage areas must have a containment system that is designed, constructed and operated as specified in Attachment VIII of the Permit and as follows:

(1) A base must underlay the containers which is free of cracks or gaps and coated with an impervious coating to contain leaks, spills, and accumulated precipitation until the collected material is detected and removed;

(2) The base must be sloped or the containment system must be otherwise designed and operated to drain and remove liquid resulting from leaks, spills, or precipitation, unless the containers are elevated or are otherwise protected from contact with accumulated liquids.

(3) The containment system must have sufficient capacity to contain the volume of the largest container or 10 percent of the total volume of containers, whichever is greater. Containers that do not contain free liquids need not be considered in this determination.

(4) Run-on into the containment system must be prevented unless the collection system has sufficient excess capacity in addition to that required in B.(3) above to contain any run-on which might enter the system.

(5) Spilled or leaked waste and accumulated precipitation must be removed from the sump or collection area within 24 hours or as timely a manner as is necessary to prevent overflow of the collection system.

C. CONDITION OF CONTAINERS 6NYCRR 373-2.9(b)

If a container holding hazardous waste is not in good condition (e.g., severe rusting, apparent structural defects, deterioration of liner) or if it begins to leak, the Permittee shall transfer the hazardous waste from such container to a container that is in good condition or otherwise manage the waste in compliance with the conditions of this Permit. Each such occurrence shall be recorded in the inspection log and maintained as part of the operating record required by Module I, Condition D.5.(c); Subpart 373-2.5(c). If any leaking container threatens human health or the environment, the Permittee must immediately report the situation as specified in Module I, Condition G, (i.e., Oral Reports).

D. COMPATIBILITY OF WASTE WITH CONTAINERS 6NYCRR 373-2.9(c)

The Permittee must use a container made of or lined with materials which will not react with, and is otherwise compatible with, the hazardous waste to be stored, so that the ability of the container to contain the waste is not impaired and in accordance with the Permit . Even though certain packagings are specified in the permit, it is, neverthless the responsibility of the Permittee to ensure that such drums are compatible with the material stored in them. This particularly applies to corrosivity, permeability, softening, premature aging and embrittlement in storage.

E. MANAGEMENT OF CONTAINERS 6NYCRR 373-2.9(d)

(1) A container holding hazardous waste must always be closed during storage, except when it is necessary to add or remove waste.

(2) A container holding hazardous waste must not be opened, handled, or stored in a manner which may rupture the container or cause it to leak.

(3) Containers holding hazardous waste must be marked with the words "Hazardous Waste@ and with other words identifying their contents. Such containers must be stored in a clearly designated area separate from nonhazardous wastes and other materials.

F. INSPECTIONS 6NYCRR 373-2.9(e)

The Permittee must inspect areas where containers are stored, looking for leaking containers and for deterioration of containers and/or the containment system caused by corrosion or other factors in accordance with the Inspection Plan/schedule in the Permit (Attachment II). Loading and unloading areas must be inspected daily when in use (373-2.2(g)(2)(iv)). The Permittee must maintain aisle space as specified in Attachment VIII between rows of containers, to allow for the unencumbered movement of containers, the personnel performing inspections or emergency responders.

G. SPECIAL REQUIREMENTS FOR IGNITABLE OR REACTIVE WASTE 6NYCRR 373-2.9(g)

The permittee shall not locate containers holding ignitable or reactive wastes within 15 meters (50 feet) of the facility=s property line

H. SPECIAL REQUIREMENTS FOR INCOMPATIBLE WASTE 6NYCRR 373-2.9(h)

(1) The Permittee shall not place incompatible wastes or incompatible wastes and materials in the same container.

(2) The Permittee shall not place hazardous waste in an unwashed container that previously held an incompatible waste or material.

(3) A container holding a hazardous waste that is incompatible with any waste or other material stored nearby in other containers, piles, open tanks, or surface impoundments must be separated from those other materials or protected from them by means of a dike, berm, wall, or other device.

I. CLOSURE 6NYCRR 373-2.9(i)

At closure, all hazardous waste and hazardous waste residues must be removed from the containment system. Remaining containers, liners, bases, and soil containing or contaminated with hazardous waste or hazardous waste residues must be decontaminated or removed. The Permittee must comply with the Closure Plan incorporated into this Permit pursuant to Module I.

J. AIR EMISSION STANDARDS 6NYCRR 373-2.9(j)

The owner or operator shall manage all hazardous waste placed in a container in accordance with the Attachment X of this permit and applicable requirements of sections 373-2.27, 373-2.28 and 373-2.29 of this Subpart, with special attention to paragraphs: (a); (c); (d) and (g) through (k) of 373-2.29 of this Subpart.

PART 373 PERMIT
MODULE IV - STORAGE/TREATMENT IN TANK SYSTEMS

A. AUTHORIZED TANK SYSTEMS AND WASTES

The Permittee is authorized to use the following tank systems for the storage (and treatment) of the following hazardous wastes subject to the terms of this permit:

Units	Capacity (Gallons)	Waste Description	EPA Hazardous Waste Code No.	Secondary Containment Volume
Part Washer Storage Tank	20,000	Safety Kleen Part Washer Solvents (Hydrocarbon- and Aqueous- Based	D001, D004- D011, D018, D019, D021- D030, D032, - D043, Nonhazardous spent part washer solvents	22,000 gallons (Steel dike aboveground tank)
Two Return and Fill Station	375 gallons x 2 = 750 gallons + 2400 gallons drummed waste and 3600 gallons of product.			4346 gallons. Refer to secondary containment volume calculation in Drawing AGPB501A
Tanker loading/ Unloading Area	7000 Gallons*	same as above	same as above	7025 gallons, Refer Drawing ABPB503B
* Volume of the tanker				

The Permittee must operate and maintain the tank systems in accordance with the portions of the Permit incorporated by reference into this Permit by Module I and with 6NYCRR 373-2.10 as cited below.

For tank systems used to store or treat materials that are defined as hazardous waste in the future, the Permittee must comply with 6NYCRR 373-2.10(b) and 6NYCRR 373-1.7(g).

B. DESIGN AND INSTALLATION OF NEW OR REPLACEMENT TANK SYSTEMS OR COMPONENTS 6NYCRR 373-2.10(c)

No new Tank System is proposed

C. CONTAINMENT AND DETECTION OF RELEASES 6NYCRR 373-2.10(d)

(1) In order to prevent the release of hazardous waste or hazardous constituents to the environment, secondary containment must be provided for tank systems that meets the requirements of 6NYCRR 373-2.10(d) and Attachment IX of the Permit

(2) Secondary containment systems must be:

(i) designed, installed, and operated to prevent any migration of wastes or accumulated liquid out of the system to the soil, groundwater, or surface water at any time during the use of the tank system; and

(ii) capable of detecting and collecting releases and accumulated liquids until the collected material is removed.

(3) Ancillary equipment must be provided with secondary containment (e.g., trench, jacketing, double-walled piping) that meets the requirements of Condition C.(2) except for:

(i) Aboveground piping (exclusive of flanges, joints, valves, and other connections) that are visually inspected for leaks on a daily basis;

(ii) Welded flanges, welded joints, and welded connections that are visually inspected for leaks on a daily basis;

(iii) Seal less or magnetic coupling pumps and seal less valves, that are visually inspected for leaks on a daily basis; and pressurized aboveground piping systems with automatic shut-off devices (e.g. excess flow check valves, flow metering shutdown devices, loss of pressure activated shut-off devices) that are visually inspected for leaks on a daily basis.

D. GENERAL OPERATING REQUIREMENTS 6NYCRR 373-2.10(e)

(1) Hazardous wastes or treatment reagents must not be placed in a tank system if they could cause the tank, its ancillary equipment, or the containment system to rupture, leak, corrode or otherwise fail.

(2) The Permittee must use appropriate controls and practices to prevent spills and overflows from tank or containment systems. These include at a minimum:

(i) spill prevention controls (e.g., check valves, dry disconnect couplings);

(ii) overfill prevention controls (e.g., level sensing devices, high level alarms, automatic feed cutoff, or bypass to a standby tank); and

(iii) maintenance of sufficient freeboard in uncovered tanks to prevent overtopping by wave or wind action or by precipitation.

(3) The Permittee must comply with the requirements of **Condition F.** below, if a leak or spill occurs from a tank system.

(4) The Permittee must mark all tanks with the words "Hazardous Waste" and with other words that identify the contents of the tank. For underground tanks, the markings must be placed on sign in the area above the tank.

E. INSPECTIONS 6NYCRR 373-2.10(f)

The Permittee must inspect tank systems and components pursuant to the Permit and the following:

(1) The Permittee must follow the schedule and procedure for inspecting overfill controls in the Permit .

(2) The Permittee must inspect at least once each operating day:

(i) aboveground portions of the tank system, if any, to detect corrosion or releases of waste;

(ii) data gathered from monitoring and leak detection equipment (e.g., pressure or temperature gauges, monitoring wells) to ensure that the tank system is being operated according to its design; and

(iii) the construction materials and the area immediately surrounding the externally accessible portion of the tank system, including the secondary containment system (e.g., dikes) to detect erosion or signs of releases of hazardous waste (e.g., wet spots, dead vegetation).

(3) The Permittee must inspect cathodic protection systems, if present, according to, at a minimum, the following schedule to ensure that they are functioning properly:

(i) the proper operation of the cathodic protection system must be confirmed within six months after initial installation and annually thereafter; and

(ii) all sources of impressed current must be inspected and/or tested, as appropriate, at least bimonthly (i.e. every other month).

(4) The Permittee must remedy any deterioration or malfunction found (373-2.2(g)(3)).

(5) The Permittee must document in the operating record of the facility those items in paragraphs E.(1) through E.(4).

F. RESPONSE TO LEAKS OR SPILLS AND DISPOSITION OF LEAKING OR UNFIT-FOR-USE TANK SYSTEMS 6NYCRR 373-2.10(g)

A tank system or secondary containment system from which there has been a leak or spill, or which is unfit for use, must be removed from service immediately, and the Permittee must satisfy the following requirements:

(1) Cessation of use; prevent flow or addition of wastes. The Permittee must immediately stop the flow of hazardous waste into the tank system or secondary containment system and inspect the system to determine the cause of the release.

(2) Removal of waste from tank system or secondary containment system.

(i) If the release was from the tank system, the Permittee must, within 24 hours after detection of the leak or, if the Permittee demonstrates that it is not possible, at the earliest practicable time, remove as much of the waste as is necessary to prevent further release of hazardous waste to the environment and to allow inspection and repair of the tanks system.

(ii) If material was released to a secondary containment system all released materials must be removed within 24 hours or in as timely a manner as is possible to prevent harm to human health and the environment.

(3) Containment of visible releases to the environment. The Permittee must immediately conduct a visual inspection of the release and, based upon that inspection:

(i) prevent further migration of the leak or spill to soils or surface water; and

(ii) remove, and properly dispose of, any visible contamination of the soil or surface water.

(4) Notifications, reports.

(i) Any release to the environment, except as provided in 4 (ii) below, must be reported to the Commissioner within 24 hours of its detection. If the release has been reported pursuant to 6 NYCRR Part 595.3, that report will satisfy this requirement. (Note: Use the DEC spill hotline number (800) 457-7362; or from outside of New York State (518) 457-7362; or any designated telephone numbers which may subsequently replace those listed above. Also, see requirements in Module I Section G., Oral Reports.)

(ii) A leak or spill of hazardous waste is exempted from the requirements of (4) if it is:

('a') less than or equal to a quantity of one pound; and

('b') immediately contained and cleaned-up.

(iii) Within 30 days of detection of a release to the environment, a report containing the following information must be submitted to the Commissioner:

(>a=) likely route of migration of the release;

(>b=) characteristics of the surrounding soil (soil composition, geology, hydrogeology, climate);

(>c=) results of any monitoring or sampling conducted in connection with
the releases (if available). If sampling or monitoring data relating
to the release are not available within 30 days, these data must be
submitted to the commissioner as soon as they become available;

(>d=) proximity to downgradient drinking water, surface water, and populated areas; and

(>e=) description of response actions taken or planned.

(5) Provision of secondary containment, repair, or closure.

(i) Unless the Permittee satisfies the requirements of (5)(ii) through (iv), the tank system must be closed in accordance with Condition G of this Module IV.

(ii) If the cause of the release was a spill that has not damaged the integrity of the system, the Permittee may return the system to service as soon as the released waste is removed and repairs, if necessary, are made.

(iii) If the cause of the release was a leak from the primary tank system into the secondary containment system, the system must be repaired prior to returning the tank system to service.

(iv) If the source of the release was a leak to the environment from a component of a tank system without secondary containment, the Permittee must provide the component of the system from which the leak occurred with secondary containment that satisfies the requirements of Condition C of this Module IV before it can be returned to service, unless the source of the leak is an aboveground portion of a tank system that can be inspected visually. If the source is an aboveground component that can be inspected visually, the component must be repaired and may be returned to service without secondary containment as long as the requirements of Condition (6) below are satisfied. If a component is replaced to comply with the requirements of this Condition, that component must satisfy the requirements for new tank systems or components in of Conditions B and C of this Module IV. Additionally, if a leak has occurred in any portion of a tank system component that is not readily accessible for visual inspection (e.g., the bottom of an inground or onground tank), the entire component must be provided with secondary containment in accordance with of Condition C of this Module IV prior to being returned to use.

(6) Certification of major repairs. If the Permittee has repaired a tank system in accordance with Condition (5)above, and the repair has been extensive (e.g., installation of an internal liner; repair of a ruptured primary containment or secondary containment vessel), the tank system must not be returned to service unless the Permittee has obtained a certification by an independent, qualified, professional engineer registered in New York in accordance with subparagraph 373-1.4(a)(5)(iv) of this Title that the repaired system is capable of handling hazardous wastes without release for the intended life of the system. This certification must be submitted to the Commissioner within seven days after returning the tank system to use.

(Note: The Commissioner may, on the basis of any information received that there is or has been a release of hazardous waste or hazardous constituents into the environment, issue an order under ECL Article 71 requiring corrective action or such other response as deemed necessary to protect human health or the environment.

See paragraph 373-2.2(g)(3) of this Part for the requirements necessary to remedy a failure. Also, 40 CFR Part 302 may require the owner or operator to notify the National Response Center of certain releases.)

G. CLOSURE AND POST-CLOSURE CARE 6NYCRR 373-2.10(h)

(1) At closure of a tank system, the Permittee must remove or decontaminate all

waste residues, contaminated containment system components (liners, etc.), contaminated soils, and structures and equipment contaminated with waste, and manage them as hazardous waste, unless paragraph 371.1(d)(4) of this Title applies. The closure plan, closure activities, cost estimates for closure, and financial responsibility for tank systems must meet all of the requirements specified in 6NYCRR 373-2.7 and 2.8 and Module I of this Permit.

Note: This Permit does not supercede or alter the requirements of the U.S. Department of Labor=s Occupational Safety and Health Administration (OSHA) standard for Confined Spaces including APermit Spaces@which are applicable to the closure activities that involve the entry by personnel into tanks.

(2) If the Permittee demonstrates that not all contaminated soils can be practicably removed or decontaminated as required in paragraph (1) of this subdivision, then the Permittee must close the tank system and perform post-closure care in accordance with the closure and post-closure care requirements that apply to landfills (see 6NYCRR 373-2.14(g)). 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 must meet all of the requirements for landfills specified in 6NYCRR 373-2.7 and 2.8.

H. SPECIAL REQUIREMENTS FOR IGNITABLE OR REACTIVE WASTES 6NYCRR 373-2.10(i)

(1) Ignitable or reactive waste must not be placed in tank systems, unless:

(i) the waste is treated, rendered, or mixed before or immediately after placement in the tank system so that:

('a') the resulting waste, mixture, or dissolved material no longer meets the definition of ignitable or reactive waste under 6NYCRR 371.3(b) or (d), and

('b') 6NYCRR 373-2.2(i)(2) is complied with.

(ii) the waste is stored or treated /in such a way that it is protected from any material or conditions that may cause the waste to ignite or react, or

(iii) the tank system is used solely for emergencies.

(2) The Permittee of a facility where ignitable or reactive wastes are stored or treated in a tank must 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" (see 6NYCRR 370.1(e)).

I. SPECIAL REQUIREMENTS FOR INCOMPATIBLE WASTES 6NYCRR 373-2.10(j)

(1) Incompatible wastes, or incompatible wastes and materials, must not be placed in the same tank system, unless paragraph 373-2.2(i)(2) of this subpart is complied with.

(2) Hazardous waste must not be placed in a tank system that has not been decontaminated and that previously held an incompatible waste or material, unless paragraph 373-2.2(i)(2) of this Subpart is complied with.

J. AIR EMISSION STANDARDS 6NYCRR 373-2.10(k)

The owner or operator shall manage all hazardous waste placed in a tank in accordance with the applicable requirements of sections 373-2.27, 373-2.28 and 373-2.29 of this Subpart, with attention to paragraphs: (a) through(e), and (h) through (k) of 373-2.29 of this Subpart and Attachment X of the permit.

SAFETY-KLEEN SYSTEMS, INC.
SYRACUSE SERVICE CENTER
EPA ID No. NYD 982743312

ATTACHMENT I

WASTE ANALYSIS PLAN

ABSTRACT

The Syracuse Service Center will manage a variety of regulated and non-regulated waste. The majority of this waste will be handled on a transfer basis in accordance with applicable USDOT and New York regulations. Hydrocarbon and aqueous based parts washer solvents will be managed for storage at the facility. These materials will be stored in a permitted 20,000-gallon, bulk storage tank and in a container storage area with a maximum waste storage capacity of 2400 gallons. The primary focus of this plan is on how the Syracuse facility will obtain data to ensure that the parts washer solvents destined for on-site commingling and storage are properly characterized and safely managed. Information is also provided on the general characteristics and practices employed for the management of transfer and on-site generated material.

<table>
<tr><th>Waste Description</th><th>Facility Capacity in gallons</th><th>Permitted Waste Codes</th><th>Estimated Annual Amount in 1000s of gallons</th></tr>
<tr><td rowspan="2">Safety-Kleen Solvent (hydrocarbon - and aqueous-based)</td><td>20,000 gallons in tank storage</td><td rowspan="2">D001, D004-D011, D018, D019, D021-D030, D032-D042, D043, non-hazardous</td><td rowspan="2">225</td></tr>
<tr><td>Container storage.
2,400 gallons</td></tr>
</table>

ATTACHMENT I - WASTE ANALYSIS PLAN

1.0 INTRODUCTION

This Waste Analysis Plan has been prepared for the Syracuse Service Center located at 6741 VIP Parkway in Syracuse, New York. The Syracuse facility functions as a permitted storage area for the management of hydrocarbon and aqueous parts washer solvents. These materials are commingled and stored in a permitted, 20,000-gallon, bulk storage tank. A portion of the warehouse is used for the management of on-site generated materials as 90-day storage exempt generator waste and containerized waste with active shipping papers on a transfer basis. The transfer material will be handled in accordance with applicable USDOT and New York regulations.

The following plan includes information on hazardous wastes and non-hazardous materials that are handled at the Service Center. The primary emphasis of this plan is on how the Syracuse facility obtains sufficient information to determine that the waste hydrocarbon- and aqueous- based parts washer solvents can be received and safely handled at, the Service Center.

Given that the remaining containerized waste material handled at the Syracuse Service Center will be physically separated from the parts washer solvent handling areas, will not be terminated at the facility, and will remain in transit while managed at the Service Center (or is generated by the facility), no regulatory-specific waste acceptance criteria information for these transfer or on-site generated wastes is required.

2.0 DESCRIPTION OF BUSINESS ACTIVITY

The Syracuse Service Center is an accumulation point for spent solvents, dry cleaning wastes, paint related wastes, automotive wastes and various other spent industrial and automotive materials. A majority of these wastes are handled on a RCRA exempt transfer basis. Only the parts washer solvents are terminated for storage. Wastes are ultimately transported off-site to a Safety-Kleen Recycle/Process Center.

Safety-Kleen is an international service-oriented company whose customers are primarily engaged in automotive repair, industrial maintenance, manufacturing, photo processing and dry cleaning. The company has been operating since 1968 offering waste collection and reclamation services for its 400,000 customers, many of whom generate less than 1,000 kilograms (2,200 pounds) of waste per month. Safety-Kleen's Syracuse facility provides waste management and recycling services to approximately 4,000 businesses, the majority of which are small businesses and small quantity generators.

Wastes managed by the Syracuse facility are transported from the Service Center to one of Safety-Kleen's Recycle/Process Centers and in many instances, the recovered materials are returned to customers as usable product. A unique feature of Safety-Kleen’s solvent service is that Safety-Kleen provides the

customer with the solvents and also manages the spent solvents. This "closed-loop" system allows Safety-Kleen to maintain control of the solvents except while they are in use at the customer's place of business. In addition, Safety-Kleen may accept spent parts washer solvent from new customers at the time of first service. Such solvent will meet Safety-Kleen acceptance criteria as if it is Safety-Kleen’s distributed solvent provided the generator demonstrates that it is similar based on information sources such as material safety data sheets.

The Syracuse facility also provides assistance to waste generators for the proper transport and management of a variety of spent automotive and industrial materials. These materials are handled in containers and managed by the service center on a transfer basis in accordance with relevant USDOT and New York regulations. A description of the closed loop waste management service provided by the Syracuse facility is detailed below. Information relative to the on-site generated wastes and the transfer waste management services offered by the Syracuse facility is also included.

2.1 Parts Washer Service

The original service offered by Safety-Kleen in 1968 was the Parts Washer Service and it remains the primary business activity. This service involves the leasing of a parts washer machine containing Safety-Kleen parts washer solvent. Safety-Kleen also provides this service for users who own their own parts washer machines. The parts washer solvents may be aqueous or hydrocarbon based. Both the hydrocarbon and aqueous-based parts washer solvents are used and managed in the same fashion. On a regularly scheduled basis, a Safety-Kleen sales representative cleans and inspects the parts washer machine and replaces the spent solvent with clean product. Each sales representative performs about fifteen of these services per day, collecting the containers of used solvent in a route truck.

When returned to the facility the parts washer solvents are transferred from the containers to a permitted hazardous waste storage and containers of fresh product are prepared for the next services. Periodically, a tanker truck is dispatched from one of the Recycle/Process Centers to deliver a load of clean product and collect the spent solvents. The spent solvents are transported to a Safety-Kleen Recycle/Process Center. Hydrocarbon solvents are recycled and returned to the service center for distribution and reuse by parts washer customers. Thus, hydrocarbon solvents are managed in accordance with a tolling agreement or closed loop recycling system.

2.2 On-Site Generated Wastes

As a result of operating and maintaining the facility, waste is generated at the Service Center. As the generator, the Syracuse facility possesses sufficient knowledge to properly handle and store this waste prior to shipping it off-site. Additional information regarding the on-site generated wastes are provided elsewhere in this document.

2.3 Transfer Waste Management Waste Service

The Syracuse Service Center offers a service to collect and process various organic and inorganic solvents and chemical wastes from its industrial and automotive customers. These wastes are not generated from Safety-Kleen supplied solvents and are not "closed-loop" wastes. These wastes are generated from a variety of processes and vary from customer to customer. These containerized wastes are managed at the facility as 10-day storage exempt wastes incidental to transport. They are temporally stored in the transfer container management areas of the warehouse.

The wastes managed on a transfer basis may be ignitable and may display toxicity characteristics, may be listed; or may be non-hazardous. These wastes are collected and transported in appropriate DOT specification containers, and are placed in the transfer container management areas in the warehouse. The materials are packaged in accordance with applicable USDOT regulations on packaging and classified and segregated in accordance with 49 CFR 173.2(a) and 177.848. Hazardous waste received as labpacks are packaged in accordance with 49 CFR 173.12(b). The transfer wastes are transported from the Service Center to a Safety-Kleen Recycle/Process Center or contract reclaimer within the regulatory required time frame.

3.0 WASTE DESCRIPTIONS

Various types of wastes will be handled by the Service Center. Wastes will be managed in both tanks and containers. Because the wastes are assumed to contain free liquids, the bulk storage tank, transfer container management areas and the return and fill station are provided with secondary containment systems. This Section provides descriptions of the waste streams terminated and stored at the Service Center (i.e., hydrocarbon and aqueous based parts washer solvents) and their associated hazardous characteristics and/or constituents. Additionally, for informational purposes, similar data is provided for on-site generated wastes and for wastes that will be managed on a transfer basis.

The only type of hazardous and non-hazardous wastes that are accepted for bulking and storage from off-site generators at the Service Center are spent parts washer solvents and solutions listed below:

- Spent parts washer solvents. These are mostly mineral spirits and they may be either hazardous or non-hazardous, and
- Aqueous solutions. These are non-hazardous with the exception of solutions used in parts washer machines intended for cleaning brakes.

In addition to the above listed materials, several types of waste material are generated on-site as a result of operations. These wastes include but are not limited to the following:

- Tank bottoms,
- Contaminated gloves, rags, paper, absorbent, etc.,
- Sediment and debris from the drum dumpsters,
- Precipitation that could accumulate in secondary containment systems. If hazardous, this waste may be transferred into the spent solvent storage tank.

An overview of the general characteristics and types of waste destined for management at the facility follows.

3.1 Permitted Storage Wastes

3.1.1 Parts Washer Service Wastes

3.1.1.1 Hydrocarbon Parts Washer Solvent

Safety-Kleen offers both low and high flashpoint mineral spirits solvents for the parts washer machines. The spent high flash solvents (i.e. with flash points greater than 140º F) may be either hazardous or non-hazardous depending on the customer's use of the parts washer machine. Low flash solvent (flash point @ 105º F) is hazardous when spent due to ignitibility. It also exhibits the toxicity characteristic for tetrachoroethlylene since tetrachoroethylene is present in small amounts in the recycled product before use. Other common toxicity constituents are benzene and trichloroethylene. The high flash solvent does not contain tetrachoroethylene before use because it is a more highly refined product.

Both hazardous and non-hazardous mineral spirits parts washer solvents may be commingled and accumulated in a 20,000-gallon aboveground hazardous waste storage tank. Containers holding parts washer solvents are poured into the drum washer/dumpster unit at the return and fill station and then are pumped into the tank.

Waste sampling and analytical studies completed by Safety-Kleen reveal a great deal about spent parts washer solvents. Analyses of spent hydrocarbon parts washer solvents show concentrations that may range from parts per million to less than 1.0 percent of polycyclic (e.g., naphthalene), chlorinated and methylated aromatics, and chlorinated aliphatics. Analyses of bulk loads of spent parts washer solvent revealed concentrations of total organic halogens ranging from 0.003 to 0.830 percent. Analyses of recycled parts washer solvent showed concentrations of total organic halogens ranging from 0.100 to 0.747 percent. Analyses of bulk loads of spent parts washer solvent revealed detectable levels of benzene, methyl ethyl ketone, perchloroethylene, trichloroethylene, 1,4-dichlorobenzene, chloroform, cresol, and 2,4-dinitrotoluene. See Appendix 1-C for a compendium of spent solvent analyses.

The recycled parts washer solvents delivered to a customer possess a clear or green color, which degrades to a brown or blackish color as it is used depending on the use of the solvent. The spent parts washer solvent generally retains the characteristic odor of the recycled parts washer solvent that is delivered to the customer.

Historically, the hazardous hydrocarbon parts washer solvents have had a flash point ranging between 102 and 140 F. Sampling of commingled bulk loads revealed a flash point range of 78 to 151 F, with a mean flash point of 112 F. The specific gravity of spent, hydrocarbon-based parts washer solvent ranges from 0.7 to 0.9. Sampling of bulk loads of spent parts washer solvent reveal specific gravities ranging from 0.780 to 0.800, with an average of 0.787. Sampling of randomly-selected individual containers of spent parts washer solvent revealed a specific gravity range of 0.792 to 0.810, and a mean specific gravity of 0.796. Sampling of bulk loads of recycled parts washer solvent reveal very consistent specific gravity readings, with averages of bulk loads ranging from 0.780 to 0.782.

Organic analyses of randomly selected individual containers of spent, hydrocarbon-based parts washer solvent detected several constituents (benzene, trichloroethylene, methyl ethyl ketone, and perchloroethylene). Analyses of the spent parts washer solvent have shown detectable levels of barium, lead, cadmium, and chromium.

3.1.1.2 Aqueous Based Parts Washer Solvent

The aqueous-based parts washer is a service that uses a solution of approximately 95% water and 5% active ingredients (surfactants). It was developed as an alternative for those customers who may want to minimize their hazardous waste generation and do not want to use hydrocarbon based solvents. The Clean Air Act, health and safety concerns and waste minimization are all possible reasons for a customer to want to use an aqueous-based parts washer. The aqueous solution is used in the same manner and application as the hydrocarbon-based solvents.

Organic analyses indicate that depending upon use spent aqueous solution may be either hazardous or non-hazardous. Constituents commonly present in the aqueous-based parts washer waste include metals and organics. These constituents may include perchloroethylene, trichloroethylene, barium, chromium, and lead. Review of Safety-Kleen's analytical data indicates that only perchloroethylene consistently exceeds regulatory thresholds. Based on annual re-characterization data (see section 4.3) only the aqueous solvents used in brake cleaning machines are RCRA hazardous when spent. As expected, the data shows the aqueous material does not have a flash point. Additional analytical data shows that the specific gravity of the material ranges from 0.95 to 1.08.

Hazardous aqueous parts washer solvents from parts washer machines are commingled and accumulated in a 20,000-gallon aboveground hazardous waste storage tank. (These solvents are commingled with the hydrocarbon-based material. The resulting material is managed as a hazardous waste.) Containers holding hazardous aqueous-based parts washer solvents are poured into the drum washer/dumpster unit at the return and fill station and then pumped into the tank.

The commingled, hazardous hydrocarbon and aqueous parts washer solvent is removed from the hazardous waste storage tank by a tanker truck on a regularly scheduled basis. Approximately 6,000-7,000 gallons are removed from the storage tank every two or three weeks. Based on the most recent lab analyses this material carries the D001, D018, D039, and D040 waste codes.

3.2 On-Site Generated Wastes

3.2.1 Tank Waste

Periodically, it may be necessary to remove the spent parts washer solvent tank bottom sediment, consisting of free water and other heavy materials such as grit and metal filings that may accumulate in the spent parts washer solvents, from the bottom of the hazardous waste storage tank. A vacuum truck is used for this purpose. This waste may be ignitable (D001) and may exhibit several of the toxicity characteristics. This waste is generated on-site by Safety-Kleen and is not a waste accepted from an off-site generator.

3.2.2 Contaminated Gloves, Rags, Paper, Absorbent, etc.

Contaminated gloves, rags, paper, absorbent and other miscellaneous material such as personal protective equipment is generated by the facility as a result of the management of hazardous wastes. Each operating day this material is placed into containers. This waste may be ignitable (D001) and may exhibit several toxicity characteristics. This waste stream is generated on-site by Safety-Kleen and is not a waste accepted from an off-site generator.

3.2.3 Drum Washer/Dumpster Waste

Sediment accumulates at the bottom of the drum washer/dumpster units located in the return and fill station. Periodically this sediment is manually removed and placed into containers. The chemical composition and hazardous characteristics of this waste are similar to that of the spent parts washer solvents tank bottom sediment and may have the same hazardous waste codes. Like the tank bottom sediment described above, this waste is generated on-site by Safety-Kleen.

3.3 Transfer Waste Management Service

A variety of hazardous and non-hazardous wastes will be accepted as 10-day storage exempt wastes and managed on a transfer basis under this program. These wastes will be collected and transported in appropriately approved containers and placed in one of the transfer container management areas at the facility. These wastes will be transported from the Cohoes Service Center to a Safety-Kleen Recycle/Process Center or contract reclaimer within the regulatory required time frame(s).

4.0 WASTE ACCEPTANCE CRITERIA

Hydrocarbon- and aqueous- based parts washer solvents are the only waste materials that the facility accepts for storage from off-site generators. Other materials handled by the facility will either be generated on-site or managed as 10-day storage exempt wastes on a RCRA exempt transfer basis in accordance with pertinent USDOT and New York regulations. Given these management practices, procedures have been established to ensure that the waste materials accepted for storage (i.e., parts washer solvents) are adequately characterized. The following sections describe the acceptance criteria for the parts washer wastes destined for bulking and storage at the

Service Center. For informational purposes, similar data is also provided on the exempt wastes managed by the facility.

4.1 Acceptance Criteria

4.1.1 Parts Washer Solvents

The waste acceptance criteria for the Service Center incorporate Safety-Kleen's historical knowledge of the parts washer solvents managed by the company, and its understanding of the closed loop system of solvent usage. Based on this background, the facility has developed a plan that uses qualitative and quantitative acceptance criteria for these solvents. This approach incorporates an assessment of how the generator will use the solvents (through a generator/customer audit) and a series of evaluations consisting of visual screening, specific gravity measurement, and material observations to evaluate whether the parts washer solvent wastes meet acceptable criteria before it is picked up.

The parts washer solvent acceptance criteria is designed to identify the presence of significant and unusual contamination that is not expected to be present based upon the normal manner in which the parts washer wastes are generated. These criteria center on evaluation of the waste at the point of generation (i.e. prior to transport). Experience has shown that the acceptance criteria detailed below provide an efficient way to evaluate the parts washer solvents and to identify customers that are not utilizing the solvent in the manner that it was intended.

4.1.1.1 Customer/Generator Profile and Audits (See Appendix I-A)

To evaluate the nature and variability of the waste and the potential for unacceptable contamination, Safety-Kleen will establish a Customer/Generator Profile/Audit (profile) for parts washer solvent customers prior to the initial acceptance of the solvent. This profile includes the information necessary to characterize the solvent for acceptance. Specifically, this will include generator information regarding the process that generated the waste, possibilities of cross contamination by other wastes and baseline information pertaining to color, odor, consistency, specific gravity, and appearance. This information will be used to determine acceptability of future waste pick ups. Copies of the profiles will be kept on file at the facility for at least 5 years.

The waste profiles will be completed by the generator and the on-site audit will be completed by a Safety-Kleen representative together with the generator representative (i.e., when the customer signs up for Safety-Kleen's parts washer service) and annually thereafter. For non-industrial based operations (i.e., those primarily engaged in the automotive business) a profile and on-site audit will be completed only at the initiation of the parts washer service. A profile/audit will be completed for industrial customers (manufacturers) annually. No parts washer wastes will be accepted from a customer until the profile is complete. The profile includes:

- general facility information
- USEPA generator status

- waste information
- process data
- information on other waste streams
- generator certifications

The intent of the profile is also to evaluate the potential contaminants that may be introduced into the parts washer solvents. Particular attention is focused on identifying sources of adverse contamination. This adverse contamination could come from pesticides, herbicides or strong oxidizers. Should such a possibility exist, the process will be reviewed with the customer to ensure that the parts washer solvents are not adversely impacted.

The profile form includes a certification to be signed by the generator and a Safety-Kleen representative. A copy of the profile form is provided in Appendix I-A. The format of this form may change without requiring prior approval from NYDEC. However, any change in the content of the audit document would require approval through the permit modification process from NYDEC.

4.1.1.2 Screening Tests for Waste Acceptance

Safety-Kleen will test the specific gravity and visually inspect each container of parts washer waste when it is collected at the customer's location. Based on its historical knowledge and understanding of the parts washer solvents' typical waste characteristics and information provided on the profile, Safety-Kleen has established the specific acceptance criteria set forth below to be used by Safety-Kleen personnel for waste acceptance. These acceptance criteria allow Safety-Kleen to check and ensure that every container of the parts washer waste picked up is not adversely contaminated (i.e., misused or mixed with unacceptable wastes) and is the same as described in the profile.

As stated in section 3.1.1.1, the specific gravity of spent solvent ranges from 0.7 to 0.9 for mineral spirits and from 0.95 to 1.08 for aqueous solutions. In view of the narrow range of these specific gravities, this is considered an important waste acceptance parameter for evaluating the waste prior to pick up.

The visual inspection criteria for evaluating spent parts washer solvents are volume, appearance (i.e., color and consistency) and odor. The container type, size and color are also used as inspection tools. Parts washer solvent is distributed by Safety-Kleen in 30, 16 and 5 gallon containers which hold approximately 23, 12 and five gallons respectively. Thus, when the waste solvent is collected and if no additional material has been added to the waste, these containers should contain the same quantity of solvent originally provided (allowing for slight losses due to drag out or evaporation). Prior to acceptance, the service representative measures the contents of the container and checks the specific gravity to ensure that the volume and specific gravity requirement is appropriate. If the volume guideline or specific gravity range is not consistent with the generator's profile, the service representative will not transport the waste back to the facility until an investigation is completed and it is determined that the waste is acceptable for receipt at the facility.

The parts washer waste is also visually inspected for its color. Unused parts washer solvent has a clear or greenish tint. As the solvent is used, it turns brown in color. The more it is used, the darker brown it becomes, until it is almost black. In certain applications such as the cleaning of printing inks, the solvent takes on a color unique to its application. If the spent solvent does not appear to be the color identified on the profile, Safety-Kleen will question the generator to assess the cause of the color variation. If a plausible explanation is not given, the waste will not be accepted at the facility.

The parts washer solvents have a faint but distinctive odor. If the waste is contaminated the sales representative may notice a difference in the odor identified on the profile. For health and safety reasons, sales representatives are instructed not to purposely sniff any waste materials. However, if unusual or uncharacteristic odors are noticed during the routine handling of these materials, this information is not ignored and is utilized as part of the waste acceptance procedure.

Together with specific gravity, volume, appearance, odor; the type, size and color of the parts washer solvent containers will also be used as an integral part of the acceptance criteria. The facility will utilize containers of specific size and design for the management of parts washer solvent. These containers will be easily recognized. Hydrocarbon based solvents will be managed in steel, 16- and 30- gallon, open-topped containers. These containers are identified by USDOT as UN 1A2 units. The hydrocarbon based parts washer solvent containers will also be color coded. The 16- and 30- gallon, UN 1A2 containers will either be green or red.

Aqueous solvent will also be managed in 16- and 30- gallon, USDOT specified UN 1A2, open-topped containers. These steel containers will be readily identified based on the blue color of the units.

In addition to the above described steel containers, a 5-gallon closed-head plastic unit will be used for hydrocarbon and aqueous based parts washer solvents. These uniquely shaped containers (USDOT specification UN 3H1) will be further distinguished by color - black for hydrocarbon-based solvent and blue for aqueous-based material. Table I - 1 summarizes the type, size and color of the parts washer solvent containers that will be used by the Service Center.

TABLE I-1

Summary of Parts Washer Solvent Containers

Container Color and Type

WASTE TYPE	WASTE CODES	DRUM TYPES	SIZE OF EACH DRUM	DRUM COLOR
SK Solvents (Hydrocarbon and Aqueous Based)	D001, D039, & Non-hazardous (as determined by annual recharacter-ization)	UN 1A2 (Steel) UN 1A2 (Steel) UN 3H1 (Plastic)	16, 30 16, 30 16, 30 5	Red Green Blue Black Blue

The container identification criteria will be further supported by a label. Each container of hydrocarbon and aqueous parts washer solvent, regardless of container type, size or color will have a rectangular product label affixed to it denoting its contents. The labels used for the hydrocarbon and aqueous parts washer solvents are included in Appendix I - A. The content of these labels may change without requiring prior approval from NYDEC. However, any change in the size or color of the labels would require approval through the permit modification process from NYDEC. When containers a transported to the facility, they also have a waste label attached. This label identifies the waste as hazardous or non-hazardous, list generator information, and contains tracking information. This descriptive identification labels, specific container size, type, and color will ensure that the spent parts washer solvents will not be contaminated by inadvertent commingling with other transfer waste managed at the facility while bulking the solvents into the storage tank.

The specific containers that Safety-Kleen uses for parts washer solvents are not used for other wastes and are not supplied to customers for uses other than parts washer service. Containers of parts washer solvents are readily distinguished from other wastes. They are only managed in containers of specified color, size, and type. They are further distinguished by the labels described in this WAP. Safety-Kleen also attaches another label to every single container that identifies the waste and the customer.

Transfer wastes in drums that are not distinguishable from permitted waste drums as described above will not be transported along with the permitted wastes in the same transport vehicles, handled in the loading/unloading docks, or stored in the same areas where permitted wastes are managed or stored.

Thus, the visual screening and material observations conducted for each waste pick up prior the collection of waste includes the following:

- specific gravity
- volume of solvent,
- color of solvent,
- incidental odor,
- type/design of container,
- size of container,

- color of container, and
- descriptive label.

Table I-2 summarizes the qualitative and quantitative acceptance criteria for the parts washer solvents. If these acceptance criteria are met, the sales representative will accept the waste. Acceptance will be documented on the service document or on a qualitative acceptance criteria checklist form (see Appendix I - A). This information will be summarized to document the inspection process at each customer location. The format of the qualitative acceptance criteria checklist may change without requiring prior approval from NYDEC. However, any change in the content of the checklist would require approval from NYDEC through the permit modification process. The checklist will be maintained in the respective customer file for at least five years.

If the waste does not meet the qualitative acceptance criteria, the customer will be interviewed to evaluate whether an acceptable reason exists for the non-conforming criteria. If an acceptable reason is not provided, the Safety-Kleen service representative will either (1) quantitatively evaluate the waste by sampling the waste for testing at a NYSDOH ELAP certified laboratory to evaluate whether the waste has been contaminated; or (2) reject the container of waste. In either event, the waste container will be left at the customer's location.

The yellow and blue product labels are displayed near the drum washer/Return & Fill Station with a notice to caution the employees that only drums with the yellow and blue labels displayed in the notice may be emptied into the drum washer for commingling in the tank.

TABLE I-2
Summary of Acceptance Parameters and Criteria

Waste Description	Acceptance Parameter	Acceptance Criteria*
Spent Parts Washer Solvent	Waste Profile	Prior to initiation of service
	Volume	No greater than amount supplied
	Color	As specified in profile
	Incidental odor[1]	No unusual or uncharacteristic odor
	Container type, size, and color	16/30 gallon UN1A2 steel in red, green, or blue 5 gallon UN 3H1 plastic in blue or black
	Container Labeling	Yellow/blue label
	Specific gravity	Range specified in profile
Transfer Waste	Container Labels	Properly completed
	Container condition	Good conditions with no bulging, leaks, significant corrosion, etc.

* Based on the generator's waste profile.
[1] For health and safety reasons service personnel are instructed not to sniff waste materials. However, if unusual or uncharacteristic odors are noticed during routine handling of these materials, this information will be utilized as part of the waste acceptance procedure.

Labpacks will be packaged in accordance with 49 CFR 173.12(b). The contents of labpacks will be inspected by Safety-Kleen authorized and qualified personnel prior to transport to ensure they are packaged in accordance with US DOT requirements.

If the parts washer waste is sampled for further analysis, a trained technician will take a sample of the waste and then seal the container and label it as hazardous waste. The drum will remain with the customer pending the results of the laboratory analysis. Sampling will be performed using the methods specified in Table I - 3. The laboratory analysis will involve analyzing the suspect waste for flashpoint, specific gravity, pH and the presence of halogenated volatile organic compounds (see Table I - 4 for specific laboratory procedures).

TABLE I-3.

Methods Used To Sample Hazardous Wastes

Safety-Kleen Systems, Inc.
Cohoes, New York

Waste	Reference for Sampling	Description of Sampling Method
Spent Safety-Kleen Solvent In Tank	Sampling a tank[1] "Samples & Sampling Procedures for Hazardous Waste Streams" EPA-600/ 2-80-018	Test Methods Evaluation of Solid Waste/Physical/ Chemical Methods, SW846, Current Edition Chapter 9
Drum Washer Sediment, Spent S-K Parts Washer Solvent	Sampling a drum[1,2] "Samples & Sampling Procedures for Hazardous Waste Streams" EPA-600/ 2-80-018	Test Methods Evaluation of Solid Waste/Physical/ Chemical Methods, SW846, Current Edition Chapter 9

[1]Sampler: Representative sample using a Coliwasa tube or other appropriate means.

[2]Sampler: Representative sample using a sample jar, stainless steel trowel, auger, shovel, or other appropriate means.

Note: The EPA Guidance Manual, Waste Analysis At Facilities That Generate, Treat or Store and Dispose of Hazardous Wastes, PB94-963603, OSWER 9938.4-03, April 1994, is also utilized as a reference.

TABLE I-4

Quantitative Waste Analysis Parameters

Safety-Kleen Systems, Inc.
Cohoes, New York

Waste Description	Parameter	Test Method[1]
Spent Parts Washer Solvents	Halogenated Volatile Organic Analysis	SK 9209 or SW-846 8260
	Specific Gravity	SK 9903
	Flash Point	SK 9401or SW-846 1010 or 1020
	pH	SK 9906 or SW-846 9040 or 9045
NOTES: [1] Safety-Kleen methods are adopted from SW-846 Methods. SOPs for SK Methods are provided in Appendix I-B.		

If the laboratory analysis reveals that the sampled waste is not contaminated with unacceptable constituents, Safety-Kleen will accept the waste from the customer. If the laboratory confirms that the waste is adversely contaminated, the generator will be responsible for securing an alternate means of disposal.

Empirical data indicates that the acceptance criteria detailed above are effective in ensuring that the parts washer solvents from off-site generators are adequately screened so that wastes containing significant or unusual contamination are not accepted.

4.1.2 On-Site Generated Wastes

The spent parts washer solvents tank bottom sediment, gloves, absorbents, paper, dumpster sediment and other miscellaneous materials are generated as a result of operating and maintaining the facility. As the generator, the facility possesses sufficient knowledge regarding the wastes to properly handle and store them prior to sending them off-site. Therefore, no specific acceptance parameters are considered necessary for these waste streams.

4.1.3 Transfer Waste Management Service (for information only)

The qualitative acceptance parameters for evaluating whether transfer wastes are acceptable will be container labeling and container condition. The sales representative will visually inspect the transfer waste container label and compare it to the shipping paper to assess whether it matches. The sales representative will also inspect the integrity of the container to ensure it is in good condition and is not bulging, corroded, etc. Additionally, the contents of labpack containers that are prepared by other than Safety-Kleen personnel will be inspected prior to transport to ensure that they are packaged in accordance with US DOT requirements.

If these acceptance criteria are met, the sales representative will transport the waste. If these criteria are not met, the container will not be managed by the sales representative until the issue(s) is corrected and the inspection criteria are satisfied.

4.2 Frequency of Analysis

Table I - 5 details the frequency for performing qualitative and quantitative analyses for the parts washer solvents and transfer wastes.

4.3 Annual Analytical Recharacterization

Safety-Kleen conducts adequate routine analysis for each consignment of closed loop waste streams (parts washer solvents) accepted at the recycle centers from the facility to confirm the identity and characteristics of the waste. Therefore, the annual analysis is substituted by an annual process description and on site audit of the generator as described in Table 1.5. The results of the above referenced routine analysis and generator audit/profile forms are entered into the operating records. In addition, the Cohoes facility participates in Safety-Kleen's annual analytical recharacterization program. This program is designed to further the company's knowledge and understanding of the spent parts washer solvents by documenting the waste characteristics of the parts washer wastes. Essentially, the program consists of analyses of random parts washer waste samples collected from Safety-Kleen customers. The analytical data is evaluated in a statistical model to determine which waste codes are likely to apply when the solvent is used in a manner consistent with expectation (i.e. in a parts washer machine). The waste streams and the annual recharacterization analytical parameters for the Syracuse facility are included in Table 1-6. Safety-Kleen provides this data to its customers to augment their generator knowledge of the waste.

The spent hydrocarbon and aqueous parts washer solvents may exhibit toxicity characteristics for constituents with waste numbers D004-D011, D018, D019, D021-D030 and D032-D043. To document characteristics, a toxicity characteristic leaching procedure (TCLP) analysis will be performed on an annual basis. TCLP analysis will be performed in Safety-Kleen laboratories approved to conduct this analysis or in a commercial laboratory approved by ELAP. The pH (corrosivity), flash point (ignitability) and specific gravity will also be performed as part of the annual analytical recharacterization.

The information garnered from the combined analytical re-characterization program is statistically evaluated. The resulting database serves as the foundation for defining the waste codes for the parts washer solvents.

TABLE I-5

Waste Analysis Frequencies

Waste Description	Parameter	Frequency[1]
Spent Parts Washer Solvents *Industrial Customers*	Profile	At initiation of service and annually thereafter.
	Volume, Appearance, Incidental Odor, drum type/color, labels	Every container at the point of service.
	Specific Gravity	Every container at the point of service.
		Confirmatory analysis at the facility. One drum randomly chosen from each service vehicle twice a month.
	Flash Point, pH, Specific Gravity, HVOCs	If waste fails acceptance criteria.
	Annual Re-characterization	Once per year, random customer sampling.
Spent Parts Washer Solvents *Non-Industrial Customers*	Profile	At initiation of service to customer. One time only.
	Volume, Appearance, Incidental Odor, drum type/color , labels	Every container at the point of service.
	Specific gravity	Every container at the point of service.
		Confirmatory analysis at the facility. One drum randomly chosen from each service vehicle twice a month.
	Flash Point, pH, Specific Gravity, HVOCs	If waste fails acceptance criteria.
	Annual Recharacterization	Once per year, random customer sampling.
Transfer Waste Management Service (for information only)	Waste Container Appearance	Every container at the point of service.
	Waste Container marks and labels.	Every container at the point of service.

NOTES:
[1] In accordance with 6NYCRR Section 373-2.2(e), Safety-Kleen will also perform physical and chemical analysis of a waste stream when it is notified or has reason to believe that the process or operation generating the waste has changed, or when the result of inspection indicates that the waste to be collected does not match the waste designated.

Table I-6

Safety-Kleen Systems, Inc.
Syracuse, New York

Hazardous Waste Description	Annual Re-Characterization Parameters[1]
Spent Hydrocarbon-Based Parts Washer Solvents	TCLP, pH, Flash Point and Specific Gravity.
Spent Aqueous-Based Parts Washer Solvents	TCLP, Flash Point, pH and Specific Gravity.
[1] TCLP waste numbers: D004-D011, D018, D019, D021-D030, D032-D043	

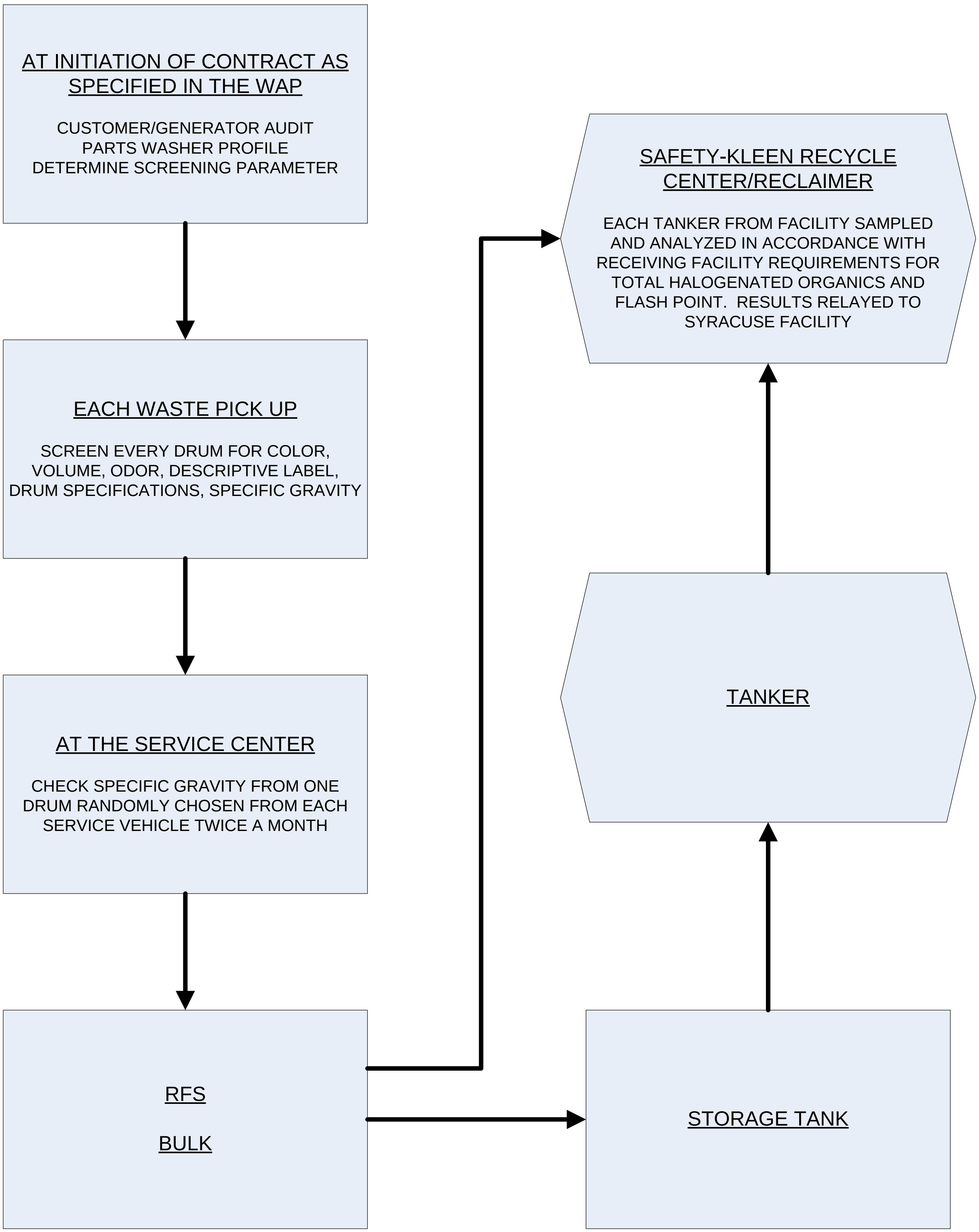
5.0 PROCEDURE FOR WASTE TRACKING.

The used hydrocarbon parts washer solvents are the primary feed stocks for the generation of Safety-Kleen solvent products. As a result, quality control of the spent solvents is necessary to ensure that reclamation occurs in the safest and most efficient manner possible. The precautions in place at the facility (i.e., qualitative acceptance parameters - audits and visual screening/material observations and specific gravity) serve as a foundation to ensure the bulk loads of solvent transported to the Recycle/Process facility can be safely and efficiently processed. Additional steps are also typically undertaken at the Recycle/Process Center to further assess the quality of the bulk solvent loads. Each bulk load tanker truck containing spent parts washer solvent is sampled at the Recycling/Process facility and analyzed for total volatile halogenated organics and for flashpoint. Sampling and analysis are conducted in accordance with the Recycle/Process centers operating permit. The analytical results must be within the receiving facility's acceptance criteria.

Bulk loads originating from the Syracuse facility will be analyzed at the receiving facility in the manner described above. The Syracuse facility will receive the analytical data on the bulk loads it sends off-site. The bulk load analytical results will be sent back to the Service Center within 45 days from the date of accepting the waste at the Recycle/Process facility. The analytical results for each bulk load shipment of solvent will be maintained until closure of the facility in the operating record of the Service Center. Should a load be rejected, information as to why and the alternate mode of management will be provided to the facility.

As a further assurance of quality control, Safety-Kleen requires physical and chemical analysis of a parts washer waste stream when it is notified or has reason to believe that the process or operation generating the waste has changed, or when the result of inspection indicates that the waste collected does not match that designated in accordance with 6NYCRR Section 373-2.2 (e). Only laboratories which are certified by the New York State Department of Health Environmental Laboratory Approval Program (ELAP) will be used if analysis is performed.

WASTE ACCEPTANCE PROCEDURE FOR PARTS WASHER WASTES



6.0 WASTE ANALYSIS REQUIREMENTS FOR LAND DISPOSAL RESTRICTIONS

In accordance with the requirements of 40 CFR Part 268.7, Safety-Kleen will obtain notification/certification from the generator for accepted wastes that are prohibited from land disposal. While Safety-Kleen will not accept the responsibility for making generator required determinations, Safety-Kleen will provide information to help educate the generators and to assist them in fulfilling their obligation to notify Safety-Kleen of Land Disposal Restriction Information. These notices will be maintained on file at the receiving facility for three years.

7.0 WASTE ANALYSIS PLAN UPDATE

This waste analysis plan will be modified through a permit modification when a new waste product is approved for storage or when current waste acceptance criteria and material management methods change. Changes may be made to the Waste Analysis Plan only with approval from the NYDEC.

APPENDIX I - A

Generator Audit/Profile

Solvent Checklist

Appendix I-D

Annual Re-characterization Statistical Model

SAFETY- KLEEN SYSTEMS, INC.

CUSTOMER/GENERATOR AUDIT & PARTS WASHER SOLVENT PROFILE

Instructions: Please complete all information. Do not leave any blank spaces. If the information requested is not applicable enter N/A in the space provided. This form must be completed and signed by an authorized representative of the generator before spent solvent is removed from the generator's site. This form must be amended any time the generator status changes or the chemical contaminants in the spent parts washer solvent managed by Safety-Kleen changes. This form may be used only for parts washer solvents supplied by Safety-Kleen.

1. Company Name:____________________________Phone:____________________________

   Address:____

   EPA ID No. (If applicable):____

   Company Contact:____

2. Describe the principal product(s) and/or service(s) performed at this facility:

   ____

3. Describe the type of parts cleaned and describe the dirt or material cleaned from the parts and identify the contaminants likely to be present in the solvent as a result of use:

   Type of Parts Cleaned:____

   Dirt and Contaminants in the Spent Solvent:____

4. For each parts washer machine, check the type of solvent used, the quantity of solvent in the machine and whether the spent solvent is a hazardous waste.

105 solvent	150 solvent	aqueous solvent	hazardous	non-hazardous	quantity (gals)
☐	☐	☐	☐	☐	________
☐	☐	☐	☐	☐	________
☐	☐	☐	☐	☐	________
☐	☐	☐	☐	☐	________
☐	☐	☐	☐	☐	________

5. Indicate each information source used to determine whether the spent parts washer solvent is a hazardous or non-hazardous waste:

   ☐ Safety-Kleen annual re-characterization analysis
   ☐ Generator knowledge of the chemicals used in their facility
   ☐ Laboratory analysis (please attach a copy if applicable)
   ☐ Other (describe)____

6. Additional Waste Products

   Other than the Safety-Kleen parts washer solvent described in section 4, describe any other waste materials that are generated or stored in the immediate vicinity of the parts washer machines that could potentially cause a contamination of the parts washer solvent if improperly managed:

   ____

If there are any materials described above, indicate the precautions the facility takes to prevent contamination of the Safety-Kleen solvent:

____	Employee Training	____	Separation of Stored Materials
____	Warning Signs	____	Other

7. Indicate the generator status of this site by checking the appropriate box. This information will be used to ensure the correct paperwork is used when the parts washer solvent is removed from the customer's facility. Note that parts washer solvent is considered waste (or generated) when it is removed from the machine at the time of service.

☐ CESQG The maximum amount of all hazardous waste generated in any 1 calendar month is less than 220 lbs or 2.2 lbs of acutely hazardous (P-listed) waste. The maximum quantity of all hazardous waste stored on site at any 1 time is less than 2,200 lbs or less than 2.2 lbs of acutely hazardous waste.

☐ SQG The maximum quantity of all hazardous waste generated in any 1 calendar month is less than 2,200 lbs. The maximum quantity of hazardous waste in storage is 13,200 lbs.

☐ LQG More than 2,200 lbs or more than 2.2 lbs of acutely (P-listed) hazardous waste is generated in any 1 calendar month. More than 13,200 lbs are stored during any 1 month.

8. CERTIFICATION

I certify that the information in this audit is true and accurate to the best of my knowledge.

Generator Rep: ______________________________ Title: ________________________

Signature: ______________________________ Date: ________________________

Safety-Kleen Rep: ______________________________ Title: ________________________

Signature: ______________________________ Date: ________________________

B – SPENT PARTS WAHER SOLVENT PROFILE

Specific Gravity: ☐ 0.7 - 0.9 (mineral spirits) ☐ 0.95 - 1.08 (aqueous) ☐ Other (specify)_____
Color: ☐ black/brown ☐ Other (specify)_____________
Odor: ☐ Typical of Solvent Supplied ☐ Other (describe)____________

Customer/Generator Certification

Customer/Generator certifies that the Spent parts Washer Solvent Profile information provided above is true and accurate to the best of its knowledge.

Customer further certifies that it will not introduce any substance into the solvent or aqueous cleaning solution, including without limitation any hazardous waste or hazardous waste constituent, except to the extent such introduction is incidental to the normal use of the machine. Customer further agrees that it will not clean parts that have been contaminated with or otherwise introduce polychlorinated biphenyls (PCBs), herbicides, pesticides, dioxins, reactives, oxidizers, peroxide formers, or listed hazardous wastes into the solvent or aqueous cleaning solution. I certify that this information is true and accurate to the best of my knowledge.

Name:______________________________ Title:________________________________

Signature:___________________________ Date:________________________________

Safety-Kleen recommends that the customer keep a copy of this document on file.

PARTS WASHER SOLVENT ACCEPTANCE CRITERIA CHECKLIST

THIS FORM MUST BE COMPLETED FOR EACH PICK UP OF PARTS WASHER SOLVENT.
RECORD THE INFORMATION FOR EACH PARTS WASHER MACHINE SERVICED**.**

CUSTOMER SK ID. NO.___________________________________

DATE OF COLLECTION___________________________________

MANIFEST NUMBER (IF APPLICABLE)_______________________

SPECIFIC GRAVITY[1]	**VOLUME (gals)**	**SOLVENT COLOR**	**YELLOW/BLUE LABEL ATTACHED TO DRUM?**		**PROPER DRUM SIZE, TYPE, COLOR?**		**UNUSUAL ODOR?**	
			Y	**N**	**Y**	**N**	**Y**	**N**
			Y	**N**	**Y**	**N**	**Y**	**N**
			Y	**N**	**Y**	**N**	**Y**	**N**
			Y	**N**	**Y**	**N**	**Y**	**N**
			Y	**N**	**Y**	**N**	**Y**	**N**
			Y	**N**	**Y**	**N**	**Y**	**N**
			Y	**N**	**Y**	**N**	**Y**	**N**
			Y	**N**	**Y**	**N**	**Y**	**N**
			Y	**N**	**Y**	**N**	**Y**	**N**
			Y	**N**	**Y**	**N**	**Y**	**N**
			Y	**N**	**Y**	**N**	**Y**	**N**
			Y	**N**	**Y**	**N**	**Y**	**N**
			Y	**N**	**Y**	**N**	**Y**	**N**
			Y	**N**	**Y**	**N**	**Y**	**N**
			Y	**N**	**Y**	**N**	**Y**	**N**

[1] Should be between 0.7-0.9 for mineral spirits and 0.95-1.08 for aqueous

The solvent descriptions here must be the same as described on the customer's profile. If the waste does not meet the above acceptance criteria, or if unusual odors or incorrect volume is noted, LEAVE THE WASTE AT THE CUSTOMER'S LOCATION. A Safety-Kleen representative will contact the customer to provide further guidance.

APPENDIX I - B

Safety-Kleen Laboratory Methods

SAFETY-KLEEN CORP.
TECHNICAL CENTER

METHOD #: 9209
REVISION: 05/03
SUPERSEDES: 11/00

ATTACHED IS A DOCUMENT FOR: **REVISION** Date: 05/22/03

TITLE: STANDARD OPERATING PROCEDURE FOR THE DETERMINATION OF HALOGENATED VOLATILE ORGANIC COMPOUNDS IN USED OILS AND NON-HALOGENATED RECYCLABLE SOLVENTS

(KEY WORDS: USED OILS, SOLVENTS, GC/ECD, HALOGENATED ORGANICS)
(BASED ON: EPA SW-846 8121)

SERIES/SUBJECT

9000 Analytical Methods
9200 Chromatography – Organic

APPROVALS:

DEPARTMENT MANAGER(S)

Vincent Donndelinger 5/22/03

Mike Conroy 5/22/03

[illegible] 5/23/03

[illegible] 6/2/03

DIRECTOR WASTE APPROVAL AND ANALYTICAL SERVICES

[illegible] 6/2/03

Login #: 193

METHOD #: 9209
SAFETY-KLEEN CORP. **REVISION: 05/03**
TECHNICAL CENTER **SUPERSEDES: 11/00**

ATTACHED IS A DOCUMENT FOR: **REVISION** Date: 05/22/03

TITLE: STANDARD OPERATING PROCEDURE FOR THE DETERMINATION OF HALOGENATED VOLATILE ORGANIC COMPOUNDS IN USED OILS AND NON-HALOGENATED RECYCLABLE SOLVENTS

(KEY WORDS: USED OILS, SOLVENTS, GC/ECD, HALOGENATED ORGANICS)
(BASED ON: EPA SW-846 8121)

SERIES/SUBJECT

9000 Analytical Methods
9200 Chromatography – Organic

COMMENTS:

INITIATOR – This SOP revision incorporates the following changes:

1. **Quality Control** – Since one of the recent strategic changes the company has made eliminated SK laboratory certification for this method, the QC for the main body of the SOP has been moved away from strict compliance with NELAP and SW-846 requirements. This involved the following QC changes:
   - **Initial Calibration** – Elimination of the requirement for 6 calibration standards when using 2nd order modeling.
   - **Calibration Verification** – Elimination of the 12-hour instrument verification frequency and end-bracketing CCS requirements. Opening the CCS acceptance window from 15 % to 20% difference.
   - **RT Windows** – Elimination of the RT window requirement (these still exist in the GC method parameters but are no longer required to be calculated using NELAP procedures).
   - **MS/MSD Frequency** – The MS/MSD preparation frequency drops from EPB to 1/20.
   - **LCS** – An LCS was added to the main body of the SOP as well as to all appendices. Recoveries from these control samples are to be control-charted rather than MS recoveries.

2. **Calibration Range** – The lowest calibration standard has been lowered from 5 µg/mL (nominal) to 4 µg/mL so that the reporting limit for MeCl2 can be lowered from 125 ppm to 100 ppm which is the required reporting limit for oil rebuttals.
3. **Appendices** –New Appendices were added giving various implementations of this method for specific applications:
   - **Appendix E** – The low-level implementation for demonstrating conformance with the SK PGS manufacturing specifications given in 3104 is now given in Appendix E, and although this appendix has also been moved away from strict NELAP/SW-846 compliance it remains a little closer than does the main body of the SOP.
   - **Appendix F** – Appendix F was added giving the low-level implementation for analyzing used products for 4 compounds regulated under the TCLP regulations (40 CFR 261.24). Although this appendix moves slightly away from strict NELAP/SW-846 compliance, it remains closer than the main body of the SOP.

ATTACHED IS A DOCUMENT FOR: **REVISION** Date: 05/22/03

TITLE: STANDARD OPERATING PROCEDURE FOR THE DETERMINATION OF HALOGENATED VOLATILE ORGANIC COMPOUNDS IN USED OILS AND NON-HALOGENATED RECYCLABLE SOLVENTS

(KEY WORDS: USED OILS, SOLVENTS, GC/ECD, HALOGENATED ORGANICS)
(BASED ON: EPA SW-846 8121)

SERIES/SUBJECT

9000 Analytical Methods
9200 Chromatography – Organic

4. **Reference Method** – The reference method was changed from EPA SW-846 8021, *Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors,* to 8121, *Chlorinated Hydrocarbons by Gas Chromatography: Capillary Column Technique.* SW-846 8121 which uses an ECD while 8021 uses the PID/ELCD combination, the 8121 chlorinated hydrocarbon Target Analyte List (TAL) is more specifically related to the SK 9209 TAL, and 8121 more clearly emphasizes a single column analysis than does 8021.

5. **Custom Standards** – The new AccuStandard custom SK standards, along with catalogue numbers and ordering information, were added to Section 7.

Vincent Donndelinger
May 22, 2003

TITLE: STANDARD OPERATING PROCEDURE FOR THE DETERMINATION OF HALOGENATED VOLATILE ORGANIC COMPOUNDS IN USED OILS AND NON-HALOGENATED RECYCLABLE SOLVENTS

(KEY WORDS: USED OILS, SOLVENTS, GC/ECD, HALOGENATED ORGANICS)
(BASED ON: EPA SW-846 8121)

1. SCOPE AND APPLICATION

1.1 This procedure is used to identify and quantify specific halogenated volatile organic compounds in used oils, oily waste waters, and non-halogenated recyclable solvents by capillary gas chromatography (GC) with electron capture detection (ECD).

1.2 The method target analyte list given in Table 1 below includes contaminants commonly encountered by Safety-Kleen, many of which are listed spent halogenated solvents given at 40 CFR 261.31 and carry the EPA Hazardous Waste Codes F001 and F002. The target analyte list may be extended to analyze other halogenated volatile organic compounds provided all of the quality control criteria are met.

Table 1

Method Target Analyte List				
No.	**Analyte**	**SK cmpd Code**	**CAS #**	**EPA Waste Code**
1	Trichlorofluoromethane	FMF	75694	F001 & F002
2	1,1,2-Trichloro-1,2,2-Trifluoroethane	FTF	76131	F001 & F002
3	Methylene Chloride	MECL	75092	F001 & F002
4	1,1,1-Trichloroethane	111	71556	F001 & F002
5	Carbon Tetrachloride	CCL4	56235	F001
6	Trichloroethylene	TCE	79016	F001 & F002
7	1,1,2-Trichloroethane	112	79005	F002
8	Tetrachloroethylene	PERC	127184	F001 & F002
9	1,3-Dichlorobenzene	MDCB	541731	–
10	1,4-Dichlorobenzene	PDCB	106467	–
11	1,2-Dichlorobenzene	ODCB	95501	F002
12	1,3,5-Trichlorobenzene	TCB3	108703	–
13	1,2,4-Trichlorobenzene	TCB1	120821	–
14	1,2,3-Trichlorobenzene	TCB2	87616	–

1.3 In association with Safety-Kleen's Oil Services (SKOS) program, this method can also be used to rebut the presumption that used oil with greater than 1000 ppm of total halogens has been mixed with listed hazardous halogenated waste and is therefore a hazardous waste itself, by demonstrating that the concentration of each target analyte is below 100 mg/L (ppm) [40 CFR 261.3(a)(2)(v), 40 CFR 279.10(b), and 40 CFR 279.44(c)].

2. SAFETY AND WASTE HANDLING

2.1 **Caution – Fire –** The use of Hydrogen as a carrier gas requires careful handling. Hydrogen is an extremely explosive gas. All gas fittings should be leak tested before use.

Caution – Fire – Some of the materials are highly flammable. Be sure there are no open flames nearby while testing or cleaning is going on. The fumes released may be flammable and migrate to open flames.

Fire – If any spill occurs, wipe up with an absorbent wipe. Used wipes and plastic pipettes must be placed in a metal container lined with a plastic trash bag. The metal top must be kept on the container at all times except to add or to remove the contents. In the event of a fire, the top should quickly smother it. Any fires involving these materials must be treated as Class A fires. The contents must be removed daily and may be discarded in the regular trash.

Fire – Since a gas chromatographic instrument is an electrical device, no open containers of flammable liquid are to be placed near the instrument.

Burns – Injectors and detectors may be extremely hot during operation. They should be cooled before septa and inserts, or detectors are serviced.

Burns – Do not attempt to open the GC oven door until the oven temperature is below 50°C.

2.2 **Eye Contact –** *Special eye protection procedures are required when using concentrated acids and bases. Refer to the corporate safety policy concerning the handling of strong acids and bases.*

2.3 **Hand Contact –** Use of disposable nitrile gloves provides adequate protection from contact with the samples and minor exposure to sulfuric acid; however any time that the gloves come into contact with sulfuric acid, they should be changed as soon as possible. All skin contact must be washed off immediately.

2.4 **Respiratory –** Exposure to the vapors from the sample should be kept to a minimum by working in a well-ventilated area. The sample container must be opened in a hood and only long enough to obtain a sample. A fitted respirator must be available for use in case of sample spills.

Respiratory Appropriate precautions must be taken before operating the gas chromatograph. The effluent from the ECD and capillary vents must be vented to an exhaust hood or charcoal split vent trap. A canopy hood for venting the hot exhaust oven air should be installed.

Respiratory – Sample vials awaiting GC analysis are to be placed into a closed container or in a well-ventilated hood. After use, gas chromatographic sample vials must be placed into a solvent-resistant container located in a well-ventilated area.

2.5 **Waste Disposal –** The remainder of the sample in the original container must be returned to sample storage for future testing or later disposal.

2.6 **Toxics –** The material safety data sheets for each chemical reagent should be read to ensure proper handling.

2.7 **Radiation –** Wipe tests for leakage of radioactive materials must be performed on the Electron Capture Detector every six months in the U.S., yearly outside the U.S., and documented. If the ECD is moved to a new site, the license, through the manufacturer, must be updated. Any ECD that is permanently removed from service must be properly disposed of in accordance with state and federal regulations. The detector must never be discarded or physically tampered with.

NOTE: Wipe test kits must be ordered from a licensed laboratory, such as:
ICN Dosimetry Service, PO Box 20889, Fountain Valley, CA 92728-0889
Phone: 1-800-251-3331

3. SUMMARY OF METHOD

3.1 Samples are diluted/extracted in hexane and, in most cases, this is followed by a sulfuric acid and silica gel cleanup. The extract is then analyzed by Gas Chromatography/ Electron Capture Detection (GC/ECD) with a split injection. The ECD, when used under the conditions given in the method, has demonstrated linearity from 4 to 40 μg/mL (instrument concentration) for most of the target compounds listed in section 1.2. Other calibration ranges may be used to address specific operational and/or regulatory concerns, providing that all of the method quality control parameters specified in section 10 can be met.

3.2 Analytical results are based on the sample composition as received (that is, they are *not* adjusted to a dry weight basis), and are expressed in weight/weight units, mg/kg. All results are to be reported to two significant figures if the concentration is between 0 - 10 mg/kg and three significant figures for concentrations ≥ 10.0 mg/kg.

3.3 The method provides for the use of gas chromatographs both with and without Electronic Pressure Control (EPC). EPC instruments are able to maintain a constant carrier gas flow rate throughout the analysis resulting in better chromatography (better resolution) in less time. However, the temperature programs provided (both for high and low level analyses) take this into account and have been developed to give adequate resolution of target analytes and interferences for non-EPC instruments as well.

4. SAMPLE HANDLING AND PRESERVATION

NOTE: Sample storage, preservation, and holding times are detailed in SK SOP 3105 and Chapter 3 of the Safety-Kleen Quality Assurance Manual.

4.1 Samples should be stored at a temperature between 40°F and 90°F. Short term elevated/reduced temperatures experienced during sample shipment will not significantly affect sample integrity.

4.2 Erroneous results may be obtained if precautions are not taken to avoid the loss of volatile material. Do not open containers unnecessarily. Results for samples from leaky containers must be marked to indicate that the sample integrity was not maintained during shipping and storage.

4.3 Plastic containers or lids may not be used for the storage of samples due to the possibility of contamination from the phthalate esters and other hydrocarbons within the plastic. For shipment of samples, use a wide mouth glass bottle (preferably plastic-coated) with a polytetrafluoroethylene (PTFE) lined cap. For samples to be used on location, any clean glass bottle is satisfactory, but some secondary containment must be provided when transporting the sample. The bottle should be filled at least 75% full but not more than 90% full.

5. INTERFERENCES

5.1 The ECD has selective sensitivity to alkyl halides, conjugated carbonyls, nitrates, organometals, and sulfur. The use of a confirmation column can be used to prevent false positives due to interferences.

5.2 Residual oxygen introduced into the chromatography system can react with components of the sample producing oxidation products to which the ECD will respond. Impure carrier gas may cause excessive noise and premature deterioration of the detector.

5.3 Solvents, reagents, glassware, and other sample processing hardware may yield artifacts and/or interferences. All these materials must be demonstrated to be free from significant interferences under the conditions of analysis by analyzing method blanks.

5.4 Interferences by phthalate esters and chlorinated paraffins can result when using the ECD. These compounds generally appear in the chromatogram as large late-eluting peaks and as broad, non-reproducible peaks from previous injections. Plastics, in particular, must be avoided because phthalates are commonly used as plasticizers and are easily extracted from plastic materials.

5.5 Co-elution is possible. For most applications, this method will provide a conservative answer (i.e., reported concentrations will usually be equal to or greater than the true concentration). Confirmation of peak identification and/or quantitation can be obtained by using an alternative column with a dissimilar stationary phase or by submitting the sample for GC/MS analysis.

5.6 For samples composed of both aqueous and organic phases, where the aqueous phase contains significant water soluble organic material (e.g. ethylene glycol), the addition of a saturated solution of sodium chloride may be necessary before analysis of the organic phase.

6. APPARATUS

NOTE: Unless indicated as mandatory, all references to manufacturer and catalog number are provided as examples of acceptable items.

6.1 **Gas Chromatograph –** A temperature programmable gas chromatograph suitable for splitless injections; equipped with an Electron Capture Detector (ECD). (Hewlett Packard 6890 Gas Chromatograph.)

6.2 **Data System –** A computer and data system capable of GC control and data acquisition and processing; able to provide qualitative and quantitative results. (HP ChemStation).

6.3 **Analytical GC Column (Mandatory) –** Crossbonded phenylmethyl polysiloxane (specific ratio is a trade secret), 60 m × 0.32 mm ID × 1.8 µm film thickness. (Restek Rtx-502.2, Cat. # 10920, or, Phenomenex ZB-624, Cat. # 7KM-G005-31 (310-212-0555)).

6.4 **Autosampler –** HP Autosampler tower designed for the specific GC to be used. (HP 6890).

6.5 **Autosampler Vials –** For GC autosampler, 11 mm with 1.8 mL capacity. (Fisher Cat. # 03-340-50A for standard opening; # 03-340-5K for larger opening to accept inserts).

6.6 **Autosampler Vial Crimp Caps –** 11 mm crimp caps for crimp top vials. (Fisher Cat. # 06-406-19B).

6.7 **Nitrogen Regulator –** 3000 psi service, 380 CGA fittings. (Restek Cat. # 20606).

6.8 **Hydrogen Regulator –** 3000 psi service, 350 CGA fittings. (Restek Cat. # 20607).

6.9 **Gas Traps/Scrubbers**:

6.9.1 **Oxygen –** Restek Cat. # 20601.

6.9.2 **Moisture –** Restek Cat. # 20601.

6.9.3 **Hydrocarbon –** Alltech Cat. # 8131.

6.10 **Vortex Mixer –** Fisher Scientific (Cat. # 12-814-54).

6.11 **Preparation Vials –** (Available from Scientific Specialties: 1-800-648-7800).

6.11.1 **20 mL Vials –** Vial and PTFE lined cap (Cat. # B-75520-SK).

6.11.2 **40 mL Vials –** Vial and PTFE lined cap (Cat. # B-75540-SK).

6.12 **Disposable 3 mL Polyethylene Pasteur Pipets** - For non-quantitative transfers and making cleanup columns. (Baxter Cat. # P5214-19, standard size bulb; P5214-21, larger bulb).

6.13 **Disposable Borosilicate Glass Transfer Pipets**:

6.13.1 1.0 mL in 0.01 mL gradations (Baxter Cat. # P4650-11X).

6.13.2 5.0 mL in 0.1 mL gradations (Baxter Cat. # P4650-15).

6.13.3 10.0 mL in 0.1 mL gradations (Baxter Cat. # P4650-110).

6.14 **Centrifuge –** Capable of accommodating 20 mL prep vials (Fisher Cat. # 05-100-25). Four-place rotor (Fisher Cat. # 05-100-28), Shield (Fisher Cat. # 05-100-36).

6.15 **Brinkmann® Dispensette® Automatic Dispensers**:

6.15.1 Hexane: 10 – 50 mL (Fisher Cat. # 13-688-85).

6.15.2 Hexane: 2 – 10 mL (Fisher Cat. # 13-688-83).

6.15.3 Sulfuric Acid: 1 – 10 mL, with bottle. (Fisher Cat. # 13-687-55).

6.16 **Disposable Gloves –** N-Dex® 4 mil Nitrile Gloves (Fisher Cat. # 11-388-32), Mandatory.

6.17 **GC Injection Port Liners –** Split/Splitless, 4 mm ID, glass wool packed. (Supelco Cat. # 2-0486,05). (Many other acceptable styles).

6.18 **Compressed Gases –** (Available from Air Products: 1-800-224-2724).

6.21.1 Hydrogen – UHP (Zero grade).

6.21.2 Nitrogen – UHP (Zero grade).

6.19 **Microsyringes –** 10 µL, 25 µL, 50µL, 100 µL, 250 µL, and 500 µL. (Fisher Cat. #s 14-824,14-824-7, 14-824-5, 14-824-6, 14-824-2, 14-824-9).

6.20 **Class A Volumetric Flasks –** 5 mL, 10 mL, 25 mL, 50 mL, 100 mL, 200 mL, 250 mL. For making standard dilutions. (Fisher Cat. #s 10-209M, 10-209A, 10-209B, 10-209C, 10-209D, 10-209E, 10-209F).

6.21 **Class A Volumetric Pipets –** 1 mL, 2 mL, 5 mL, 10 mL, 20 mL, 25 mL. (Fisher Cat. #s 13-650- 2B, 13-650- 2C, 13-650- 2F, 13-650- 2L, 13-650- 2N, 13-650- 2P).

7. REAGENTS AND STANDARDS

NOTE: Safety-Kleen has contracted with AccuStandard, Inc. to supply the custom SK SOP standards formerly supplied by the SK Technical Center. These standards now have AccuStandard catalogue numbers of the form "S-9409-xx" with the last two digits specifically identifying each SK standard (e.g., S-9409-01), and which are given in the appropriate sections of this SOP. Unopened ampoules have indefinite shelf-lives; holding times begin when the ampoules are broken. For ordering, contact AccuStandard at 1-800-442-5290.

NOTE: Reagents and Standards Labeling Requirements.

Reagents must have the following clearly identified:

Container: Description, Source, Lot #, Purity (or grade), Date of Receipt, Date Opened.
Logbook: Description, Source, Lot #, Purity (or grade), Date of Receipt.

Standards and all solutions must have the following clearly identified:

Container: Description, Nominal Conc., Date Prepared/Opened, Expiration Date.
Logbook: Standard/solution Name, Sources, Lot #s, Purities (or grades), Concentrations, Preparer's Name, Date Prepared/Opened, Expiration Date.

7.1 **Hexane –** Pesticide Grade (Fisher Cat. # H300-4).

7.2 **Isooctane –** Pesticide Grade (Fisher # 0297-4)

7.3 **Sulfuric Acid –** ACS Grade (Fisher Cat. # A300S-212).

7.4 **Silylation Reagent –** For silanizing injection port liners if they are not obtained pre-silanized. Supelco Sylon-CT (Supelco Cat. # 3-3065).

7.5 **Sodium Sulfate Anhydrous –** ACS Grade, Granular (Fisher Cat. # S415-1). Dry at 130°C and cool in a desiccator for at least 30 minutes before use.

7.6 **Silica Gel Adsorbent –** Chromatographic Silica Gel, 100-200 mesh, Grade 634 Type 60A (Fisher Cat. # S734-1). To activate: heat at 160°C for 3 hours. Cool in desiccator.

7.7 Stock Calibration Standard – The custom Calibration Stock Standard available from AccuStandard (S-9409-21) is an isooctane solution containing all fourteen of the target analyte compounds as well as the surrogate standard, bromochlorobenzene (BCB), at a concentration of 10,000 µg/mL (Nominal 1%), except as indicated in Table 2 below:

Table 2

Stock Calibration Standard			
Analyte	SK Code	Concentration	
		µg/mL	Percent (%)
Trichlorofluoromethane	FMF	5,000	0.5
1,1,2-Trichloro-1,2,2-Trifluoroethane	FTF	10,000	1.0
Methylene Chloride	MECL	25,000	2.5
1,1,1-Trichloroethane	111	10,000	1.0
Carbon Tetrachloride	CCL4	5,000	0.5
Trichloroethylene	TCE	10,000	1.0
1,1,2-Trichloroethane	112	10,000	1.0
Tetrachloroethylene	PERC	10,000	1.0
1,3-Dichlorobenzene	MDCB	10,000	1.0
1,4-Dichlorobenzene	PDCB	10,000	1.0
1,2-Dichlorobenzene	ODCB	10,000	1.0
4-Bromomchlorobenzene*	BCB	10,000	1.0
1,3,5-Trichlorobenzene	TCB 135	10,000	1.0
1,2,4-Trichorobenzene	TCB 124	10,000	1.0
1,2,3-Trichlorobenzene	TCB 123	10,000	1.0

* Surrogate Standard

The Stock Standard must be stored in tightly sealed vials with PTFE-lined screw-caps at a temperature of 4°C or below with minimal headspace, and has a shelf-life of six (6) months.

7.8 Intermediate Calibration Standard – An Intermediate Calibration Standard at a concentration of 100 µg/mL (FMF and CCL4 at 50 µg/mL, and MECL at 250 µg/mL), can be prepared by making a 1:100 dilution of the Stock Standard with isooctane. Pipet 1.0 mL Stock Standard into a 100 mL volumetric flask containing about 50 mL isooctane, bring to the mark with isooctane and mix well. The Intermediate Standard must be stored in tightly sealed vials with PTFE-lined screw-caps at a temperature of 4°C or below, and has a shelf life of six (6) months.

7.9 Working Calibration Standards – Working Calibration Standards are prepared from the 100 µg/mL Intermediate Standard by dilution into 50 mL volumetric flasks at five concentration levels. Each standard can be prepared by using the amounts of Intermediate Calibration Standard indicated in Table 3 below, and diluting to volume with isooctane.

Table 3

Working Calibration Standards				
Volume of Int. Stock Std. (mL)	Final Volume of Cal. Std. (mL)	Final Conc. of Working Std. (µg/mL)	Final Conc. of MECL (µg/mL)	Final Conc. of FMF & CCL4 (µg/mL)
2	50.0	4.0	10	2.0
5.0	50.0	10	25	5.0
10.0	50.0	20	50	10
15.0	50.0	30	75	15
20.0	50.0	40	100	20

See Appendix D for a standard preparation scheme using SMI micro-pipettes. Alternative calibration standard concentrations can be used to cover a different range provided the linearity and pertinent QC requirements can be met (Section 10).

7.10 Calibration Check Standard (CCS) – The custom Calibration Check Standard available from AccuStandard (S-9409-22) is an isooctane solution containing the target analytes and the surrogate standard (BCB) at a concentration of 20 µg/mL, MECL at 50 µg/mL, and FMF and CCL4 at 10 µg/mL. The CCS is prepared independently from the Working Standards. This check standard must be stored in sealed vials with PTFE-lined screw-caps at a temperature of 4°C or below, and has a shelf-life of six (6) months.

7.11 Surrogate Spiking Standard, 4-Bromochlorobenzene (BCB) – The custom Surrogate Spiking Standard available from AccuStandard (S-9409-20) is a methanolic solution of 4-Bromochlorobenzene at a concentration of 60,000 µg/mL. The surrogate spiking solution is used at this concentration (60,000 µg/mL) for spiking samples to be diluted 100-fold, and at a concentration of 6000 µg/mL for spiking samples to be diluted 10-fold. Pipet 1.0 mL Stock Spiking Standard into a 100 mL volumetric flask containing about 50 mL methanol, bring to the mark with methanol and mix well. To prepare a surrogate spiking solution for spiking samples to be analyzed neat, make this dilution with isooctane rather than with methanol (a little acetone will facilitate the miscibility of the methanol in the isooctane). Prepared and used in this way, each of these surrogate spiking solutions results in an instrument concentration of 20 µg/mL:

10-Fold Dilutions and Neat:

$$\frac{(6{,}000\,mg/mL)(0.100\ mL)}{(30\,mL)} \quad = \quad 20\,mg/mL$$

100-Fold Dilutions:

$$\frac{(60{,}000\,mg/mL)(0.100\ mL)(1\,mL)}{(30\,mL)(10\,mL)} \quad = \quad 20\,mg/mL$$

This Surrogate Spiking Solution must be stored in tightly sealed vials with PTFE-lined screw-caps at a temperature of 4°C or below, and has a shelf life of six (6) months.

7.12 Matrix Spiking (MS)/ Laboratory Control Sample (LCS) Spiking Standard – The Matrix Spiking / Laboratory Control Sample Concentrate available from AccuStandard (S-9409-23) is an isooctane solution containing 111 and ODCB at a concentration of 4000 µg/mL, and MECL at a concentration of 12,000 µg/mL. The MS/LCS Spiking Standard is used at this concentration (4000 µg/mL) for spiking samples to be diluted 100-fold, and at a concentration of 400 µg/mL for spiking samples to be diluted 10-fold. Used in this way, each of these matrix spiking solutions will result in instrument concentrations of 12.9 µg/mL for the 111 and ODCB, and 38.7 µg/mL for the MECL.

111 and ODCB with 100-Fold Dilutions:

$$\frac{(4000\,mg/mL)(1.0\ mL)(1.0\ mL)}{(31\ mL)(10\ mL)} \quad = \quad 12.9\,mg/mL$$

MECL with 100-Fold Dilutions:

$$\frac{(12{,}000\,mg/mL)(1.0\ mL)(1.0\ mL)}{(31\ mL)(10\ mL)} \quad = \quad 38.7\,mg/mL$$

This MS/LCS spiking standard must be stored in tightly sealed vials with PTFE-lined screw-caps and has a shelf-life of six (6) months.

8. PREVENTIVE MAINTENANCE

8.1 Clean all contamination, both spillage and routine handling, from the hood and instrument surfaces. Check for proper autosampler syringe operation (plunger is not sticky and syringe is correctly aligned with injection port). Refill hexane syringe wash solvent in the autosampler. Clean the autosampler waste vials as necessary.

8.2 Change the GC septum and injection insert as necessary. Recommended; every 50 to 75 injections. Silanization of the GC inserts is recommended. Injection of methanol after insert replacement is effective for conditioning of the insert and column.

8.3 New columns should be conditioned under the manufacture's recommended conditions with carrier gas flowing and with the column outlet *disconnected* from the detector.

> **CAUTION: Hydrogen must be vented outside the GC oven, when the column is disconnected from the detector, to prevent Hydrogen accumulation and possible explosion. Be sure that any other columns present in the oven are thermally stable under the conditions used.**

8.4 Monitor the background signal on the ECD. Periodically clean the ECD by heating the detector up to 350°C for 15 to 30 min.

8.5 All maintenance must be documented in the instrument logbook.

9. TROUBLESHOOTING AND CORRECTIVE ACTION

9.1 If the quantitation obtained for the CCS is not within the control limits, corrective action must be taken. Check for septum leakage, faulty syringe operation, column integrity, and changes in gas flow rates. Corrective action usually begins with GC septum and insert replacement. Occasionally it will be necessary to remove the first few inches of the GC column.

9.2 The standards are prepared from volatile materials. While the maximum shelf life is six months, problems due to loss of the most volatile components may be observed earlier and may require the preparation of new standards.

9.3 An elevated background signal produced by the ECD indicates contamination of the detector requiring bake-out of the ECD (with the column end disconnected and vented outside the GC oven. Also, cap the ECD inlet.)

10. QUALITY CONTROL

NOTE: Calculations for the determination of the universal quality control parameters (e.g., percent recovery, percent difference, relative percent difference (RPD), and relative standard deviation (RSD)), are given in the Safety-Kleen Quality Assurance Manual.

NOTE: Corrective actions to be taken when the following quality control parameters are out-of-control are given in the Safety-Kleen Quality Assurance Manual.

10.1 **Initial Calibration –** The instrument calibration consists of at least five (5) concentrations, typically at the concentrations given in Section 7.9. The calibration data may be modeled with either a linear (first order) or a quadratic (second order) curve fit. The correlation coefficient of the calibration model must be ≥ 0.99 for each analyte to demonstrate acceptable "goodness-of-fit." The regression analysis must be *unweighted* and the origin must be *ignored* (not *included* or *forced*). Recalibration is required only when the Calibration Check Standard criteria cannot be met.

10.2 **Calibration Verification –** Every analytical batch (EAB) or every twenty (20) samples, whichever results in a greater frequency, the instrument calibration must be verified by the analysis of a calibration check standard (CCS). The QC acceptance criteria for the CCS is that the *average* percent difference of all of the analytes in the CCS (including the surrogate) must be ≤ 20 % different from the initial calibration. Use the absolute values of the individual percent differences to calculate the average percent difference. If the CCS results indicate that the calibration is outside the control limits, and corrective actions do not correct the problem, then the instrument *must* be recalibrated.

10.3 **Surrogate Standard –** The surrogate standard, 4-Bromochlorobenzene (BCB), must be added to all Sample, Method Blank, MS/MS, and LCS preparations. BCB must elute between 15.4 – 16.0 minutes on EPC instruments and between 17.1 – 17.7 minutes on non-EPC instruments (using the 20-minute temperature program). The control limits for the surrogate standard are 70 – 130 % recovery.

10.4 **Method Blanks –** Every preparation batch of ≤ 20 samples, a method blank must be prepared and analyzed by processing a hexane blank through the same dilution scheme and clean-up as that used for the samples. The QC acceptance criterion is as given in the Safety-Kleen Quality Assurance Manual.

10.5 Matrix Spike and Matrix Spike Duplicate Samples (MS/MSD) – Every twenty (20) samples, a matrix spike/matrix spike duplicate pair must be prepared and analyzed. These spiked samples are used to generate both accuracy (percent recovery, %R), and precision (relative percent difference, RPD) data. The control limits for the MS/MSD are given in Table 4 below:

Table 4

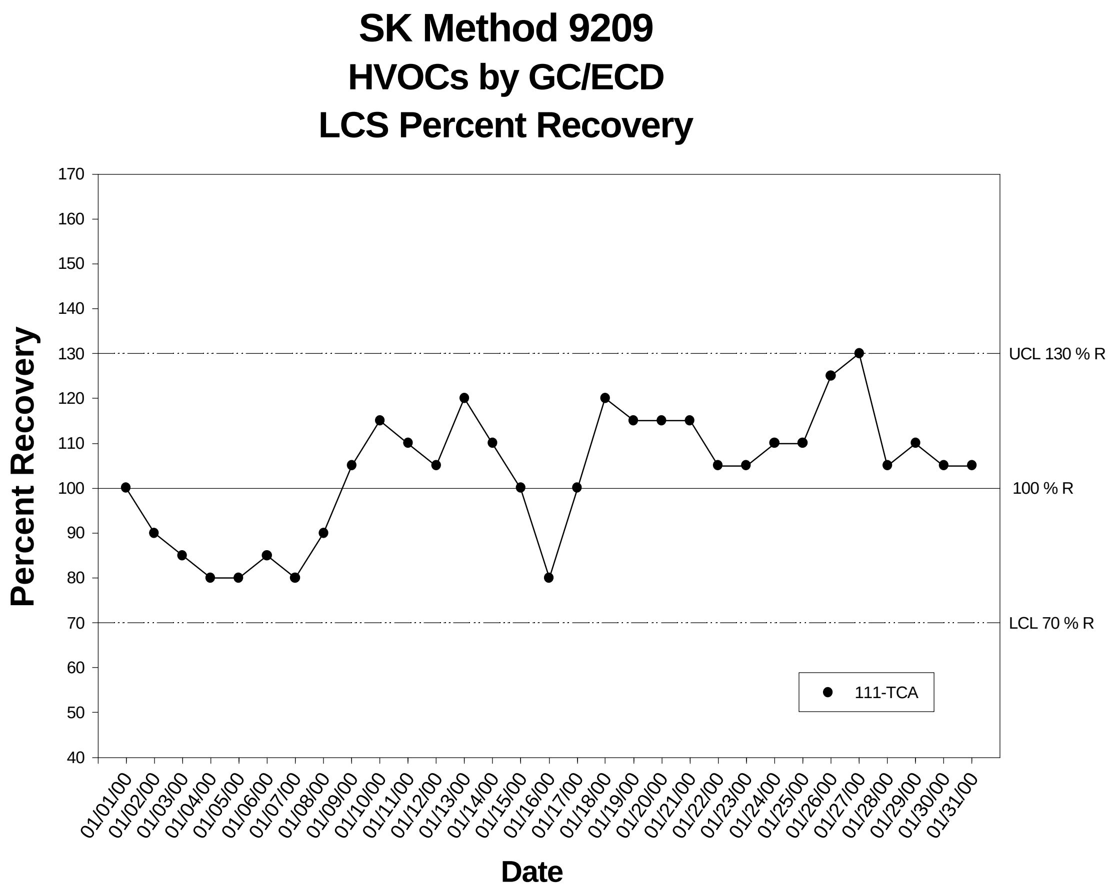
MS/MSD Control Limits			
Analyte	**Code**	**Accuracy % Recovery**	**Precision % RPD**
Methylene Chloride	MECL	50-130%	≤ 20%
1,1,1-Trichloroethane	111	70-140%	≤ 20%
1,2-Dichlorobenzene	ODCB	50-120%	≤ 20%

If the native concentration of any matrix spike compound exceeds five times the matrix spiked concentration in the final dilution, then the matrix spike recoveries are marked with “matrix interference” and are not included in any performance tracking systems.

10.6 Laboratory Control Sample (LCS) – Every twenty (20) samples, a Laboratory Control Sample must be prepared and analyzed. A laboratory Control sample is a “spiked blank” using the same spiking solution as is used to spike the MS/MSD samples. These control samples are used to demonstrate the performance of the entire method (preparation and instrumentation) without the influence of the sample matrix. The control limits for the LCS are 70 – 130 percent recovery.

10.7 Method Performance – Method performance is detailed in the Safety-Kleen Quality Assurance Manual, which includes sections on Method Startup, Reporting Limits, Method Detection Limits (MDLs), Method Control, and Initial Demonstrations of Capability (IDC).

10.8 Quality Control Charts – Computer generated quality control charts shall be updated daily and printed monthly by plotting the percent recoveries of 111, MECL, and ODCB from the Laboratory Control Sample (LCS) analyses. An example QC chart follows:



11. PROCEDURE

NOTE: This section gives the "high-level" implementation of this method most commonly used by both Prequalification and Receipt Safety-Kleen laboratories for analyzing wastes for HVOCs. The appendices also included with this method give other implementations for specific applications: Appendix E gives a low-level implementation, typically used by receipt laboratories, for demonstrating conformance to SK's Premium Gold Solvent (PGS) product specifications (as given in SK 3104), and Appendix F gives another low-level procedure, typically used by the prequalification laboratory, for analyzing used SK products for four regulated volatile hazardous contaminants pertinent to the toxicity characteristic and given at 40 CFR 261.24.

11.1 Sample Preparation:

11.1.1 Sample Dilution - If the sample is pipettable, use a graduated disposable transfer pipet and transfer 3 mL of sample into a tared 40 mL vial (PTFE-lined screw cap) and weigh to the nearest 0.01 gram. Alternatively, transfer the weight of sample equivalent to a volume of 3 mL (e.g., 2.4 grams for a material with a density of 0.8 g/mL) to a 40 mL vial and record the weight to the nearest 0.01 gram. Spike the sample with 100 µL of 4-Bromochlorobenzene Surrogate Spiking Solution (60,000 µg/mL for 100-fold dilutions, 6,000 µg/mL for 10-fold dilutions). If the sample is miscible with the hexane diluent, dispense 27 mL into the vial; if the sample is not miscible[1] with the solvent (e.g. water and non-dissolvable solids), use a 3 gram sample size and dispense 30 mL of the hexane diluent. Cap the vial and vortex vigorously for at least 30 seconds (longer for immiscible samples where an *extraction* rather than merely a simple dilution, is required). This yields a 1:10 sample dilution.

Perform further dilutions as necessary to bring the concentration of target analytes within the calibrated range of the instrument. (Solvents typically require a further 10-fold dilution.) To effect another 1:10 dilution (for a total of a 1:100 fold dilution) use a disposable 1 mL pipette to transfer 1.0 mL of the solution into a 22 mL screw-cap vial containing 9.0 mL hexane and vortex for at least 10 seconds.

NOTE: When rebutting the presumption that used oil with greater than 1000 ppm halogens (as determined by Dexsil) has been mixed with listed halogenated hazardous waste, SKOS sample dilutions should initially be performed at 1:10 to ensure that the sample quantitation limit remains above the regulatory limit of 100 ppm.

If the material is known ahead of time to have high levels of halogenated solvents and low levels are not important, it is acceptable to perform a larger initial dilution. When both low and high concentrations of analytes are needed, it may be necessary to analyze the sample at different dilutions, including neat analyses, to quantitate all target analytes within the calibration range of the instrument. However, the minimum aliquot of the original sample to be diluted is 3 mL in an attempt to ensure a representative sample.

[1] If the sample is only *partially* miscible with the hexane diluent (e.g. immersion cleaner), add 27 mL of hexane and add to the extraction an additional volume of hexane equivalent to the *non-miscible* portion of the sample. This is to ensure an extract volume of 30 mL.

11.1.2 **Liquid Samples Analyzed Neat –** Liquid samples may be analyzed neat when low-level quantitation is required and the sample matrix is amenable to direct analysis by GC (e.g., interferences are minimal or absent). Spike 30 mL of neat sample with 100 µL of 6,000 µg/mL 4-Bromochlorobenzene Surrogate Spiking Solution. It will also be necessary to determine the density (or specific gravity) of the sample for the final quantitative calculation.

11.1.3 **Method Blanks –** Pipet or transfer 3 mL of the hexane diluent used to prepare samples, to a 40 mL vial and spike with 100 µL of the Surrogate Spiking Solution (60,000 µg/mL for 100-fold dilutions, 6,000 µg/mL for 10-fold dilutions). Proceed with its preparation in identical manner to the sample preparations.

11.1.4 **Matrix Spike and Matrix Spike Duplicate Samples –** Add 1.0 mL of the 4000 µg/mL or 400 µg/mL Matrix Spiking Standard, depending on whether the samples will be diluted by a factor of 100 or 10 respectively, to the sample just after the addition of the surrogate standard and *prior* to the addition of the hexane diluent. The spiked sample is then treated as a regular sample. For matrix spiking neat samples, add 1.0 mL of the 400 µg/mL matrix spiking solution to 30 mL of sample.

11.1.5 **Laboratory Control Samples –** Add 1.0 mL of the 4000 µg/mL or 400 µg/mL Matrix Spiking Standard, depending on whether the associated MS/MSD and samples will be diluted by a factor of 100 or 10 respectively, to 3 mL of hexane just after the addition of the surrogate standard and *prior* to the addition of the hexane diluent. The LCS is then treated as a regular sample.

11.2 Sample Clean-Up – Transfer approximately 10 mL of the hexane (upper) layer to a 22 mL vial, add about 3 mL concentrated sulfuric acid, and vortex well. Wait about two minutes to allow phases to separate, centrifuge if necessary. Transfer the organic phase to another vial and add approximately 0.25 g activated silica gel or Florisil and 0.25 g anhydrous sodium sulfate. Vortex and allow the solids to settle, centrifuge if necessary. Use a disposable pipet to transfer the hexane layer to a properly labeled GC autosampler vial so as to fill it at least 1/2, but no more than 3/4 full.

> NOTE: **Use sample clean-up only where necessary. Typically, used lube oils require a double acid wash while recyclable non-halogenated solvents do not require cleanup. Acid clean-up is not appropriate for immersion cleaner and some solvents.**

11.3 Instrumental Conditions – A twenty (20) minute temperature program is provided. The column flow rate (column head pressure) must be set so that BCB elutes between 15.4 – 16.0 minutes on EPC instruments, and between 17.1 – 17.7 minutes on non-EPC instruments. Example CCS chromatograms analyzed under these conditions, with and without EPC, are given in Appendices C and D, respectively. The 32-minute temperature program given in Appendix E may also be used for this high-level analysis. The sample injection volume, as well as all other instrumental conditions must be the same for the analysis of samples as those used for the analysis of the calibration standards.

11.3.1 Gas Chromatographic Conditions:

Purge On	Initially and throughout the analysis.
Purge Vent (Septum Purge)	~ 5 mL/min.
Split Vent (Inlet Purge)	~ 60 mL/min.
Split Ratio	20:1
Sample size	1.0 µL
Injection Port Temperature	250°C
Detector Temperature	300°C
Carrier Gas	Hydrogen
Column Head Pressure	Dependent on BCB RT (approx. 12.5 psi.)
Column Flow Rate	~ 3 mL/min (EPC in Constant Flow mode.)
Make-up gas	Nitrogen
Make-up gas rate	~ 60 mL/min.

11.3.2 Twenty (20) Minute Temperature Program (EPC and non-EPC Instruments):

Initial Temperature	45°C
Initial Time	1.0 minute

First Ramp:

Ramp Rate	10 C°/min.
Final Temperature	175°C
Final Time	0 minutes

Second Ramp:

Ramp Rate	20 C°/min.
Final Temperature	275°C
Final Time	1.0 minute

The final holding time may be extended to "bake-out" the column between analyses.

11.4 Instrument Calibration – Chromatograph at least five (5) initial calibration standards to develop the instrument calibration curves. Although the standard concentrations are typically those given in section 7.9, alternative calibration ranges are allowed in order to accommodate the need for other levels of interest, provided that all of the pertinent quality control requirements are met. The instrument calibration must be verified with an independent calibration check standard (CCS) before use.

11.4.1 Calibration Sequence:

1. 5 Calibration Standards at selected concentrations.
2. CCS to independently verify the initial calibration before use.

11.5 Instrumental Analysis:

11.5.1 Typical Analytical Sequence:

1. CCS
2. Method Blank
3. LCS/MS/MSD
4. Samples 1 – 20

11.5.2 Compound Identification – Target analytes are identified by absolute peak retention time. Chromatographic control is demonstrated for every analysis by obtaining a retention time for the surrogate standard within its control window. Chromatographic peaks which then fall within the target analyte retention time windows are identified as target analytes. Analyte elution order and typical retention times using the 20-minute temperature program are given in Appendix B and C for both EPC and non-EPC instruments respectively.

11.5.3 ESTD Quantitation – Once a target analyte is identified, it is quantitated by the External Standard (ESTD) method of quantitation. The raw data file is processed against the multipoint calibration table (under *Report Generation* routines in HP ChemStation). The data system will use the integration parameters specified in the method to integrate the chromatographic peaks. The areas generated by this process will be compared to the areas in the calibration table and quantitative results generated (i.e., *mathematical interpolation*). These results will be in the same units as those used for the calibration standards, µg/mL, and are the *Instrument Concentrations*.

NOTE: Extrapolation of the calibration curve to concentrations above or below those of the actual multipoint calibration standards can lead to significant quantitative errors and is not permitted. If the instrument concentration exceeds the calibration range of the instrument, the extract must be further diluted and reanalyzed within the calibration range.

12. CALCULATIONS

12.1 Diluted Analyses - The data system, integrator, or calculator, which has been programmed with the initial calibration data, gives analyte concentrations for the chromatographed solution in μg/mL (the *Instrument Concentration*) by interpolation from the calibration curve established in section 11.4. This concentration must be multiplied by factors representing the sample preparation procedure to arrive at the original *Sample Concentration*. The following equation gives analyte concentrations in the original sample in weight/weight units, *mg/g* (equivalent to mg/kg), on a wet weight basis (that is, there is no correction made for the water content to adjust results to a dry weight basis). Report results to two significant figures if the concentration is between 0-10 mg/kg and three significant figures for concentrations ≥ 10.0 mg/kg.

12.1.1 10-Fold Sample Dilutions:

$$\textit{Sample Analyte Conc. (mg/kg)} = \frac{(Instrument\ \ Conc.(mg/mL))(30\,mL)}{(Sample\ Mass\ (g))}$$

12.1.2 100-Fold Sample Dilutions:

$$\textit{Sample Analyte Conc. (mg/kg)} = \frac{(Instrument\ Conc.(mg/mL))(30\,mL)(10\,mL)}{(Sample\ Mass, g)\,(1.0\,mL)}$$

Where:

Sample Analyte Conc. = *Concentration of the Analyte in the original Sample in mg/kg (equivalent to mg/g).*

Instrument conc. = *The Concentration of the Analyte in the prep solution chromatographed on the GC (mg/mL).*

Sample Mass = *Mass of the Sample in grams.*

A conversion factor, numerically equal to unity, is implied in the above equations to yield units of mg/L:

$$\left(\frac{1\,mg}{1000\,mg} \times \frac{1000\ g}{1\,kg}\right)$$

12.2 **Liquid Samples Analyzed Neat –** For samples analyzed neat, the sample concentration is equal to the instrument concentration:

$$Sample\ Analyte\ Conc.\,(mg/g) = \frac{(Inst.\,Conc.,\ mg/mL)}{(Sample\ Density,\ g/mL)}$$

13. REFERENCES

NOTE: All EPA OSWER SW-846 Methods are available on the world wide web at http://www.epa.gov/epaoswer/hazwaste/test/main.htm**, and all ASTM methods are available at** http://www.astm.org **(The EPA methods are free while ASTM charges a fee).**

13.1 **USEPA, OSWER**. Test Methods for Evaluating Solid Waste, Physical/Chemical Methods**,** SW-846. Third Edition (November 1986), Final Update III: **Method 8121**, Rev. 0 (09/94), *Chlorinated Hydrocarbons by Gas Chromatography: Capillary Column Technique.*

13.2 **USEPA, OSWER**. Test Methods for Evaluating Solid Waste, Physical/Chemical Methods**,** SW-846. Third Edition (November 1986), Final Update III: **Method 8000 B**, Rev. 2 (12/96), *Determinative Chromatographic Separations.*

13.3 **USEPA, OSWER**. Test Methods for Evaluating Solid Waste, Physical/Chemical Methods**,** SW-846. Third Edition (November 1986), Final Update III: **Method 3500 B**, Rev. 2 (12/96), *Organic Extractions and Sample Preparation.*

13.4 **USEPA, OSWER**. Test Methods for Evaluating Solid Waste, Physical/Chemical Methods**,** SW-846. Third Edition (November 1986), Final Update III: **Method 3580 A**, Rev. 1 (07/92), *Waste Dilution.*

13.5 **USEPA, OSWER**. Test Methods for Evaluating Solid Waste, Physical/Chemical Methods**,** SW-846. Third Edition (November 1986), Final Update III: **Method 3585**, Rev. 0 (12/96), *Waste Dilution For Volatile Organics.*

13.6 **USEPA, OSWER**. Test Methods for Evaluating Solid Waste, Physical/Chemical Methods**,** SW-846. Third Edition (November 1986), Final Update III: **Method 3620 B**, Rev. 2 (12/96), *Florisil Cleanup.*

13.7 **USEPA, OSWER**. Test Methods for Evaluating Solid Waste, Physical/Chemical Methods**,** SW-846. Third Edition (November 1986), Final Update III: **Method 3630 C**, Rev. 3 (12/96), *Silica Gel Cleanup.*

13.8 **USEPA, OSWER**. Test Methods for Evaluating Solid Waste, Physical/Chemical Methods**,** SW-846. Third Edition (November 1986), Final Update III: **Method 3665 A**, Rev. 1 (12/96), *Sulfuric Acid/Permanganate Cleanup*.

13.9 **Laboratory Quality Assurance Manual,** Safety-Kleen Technical Center.

List of Appendices

Appendix A

Typical Analyte Retention Times

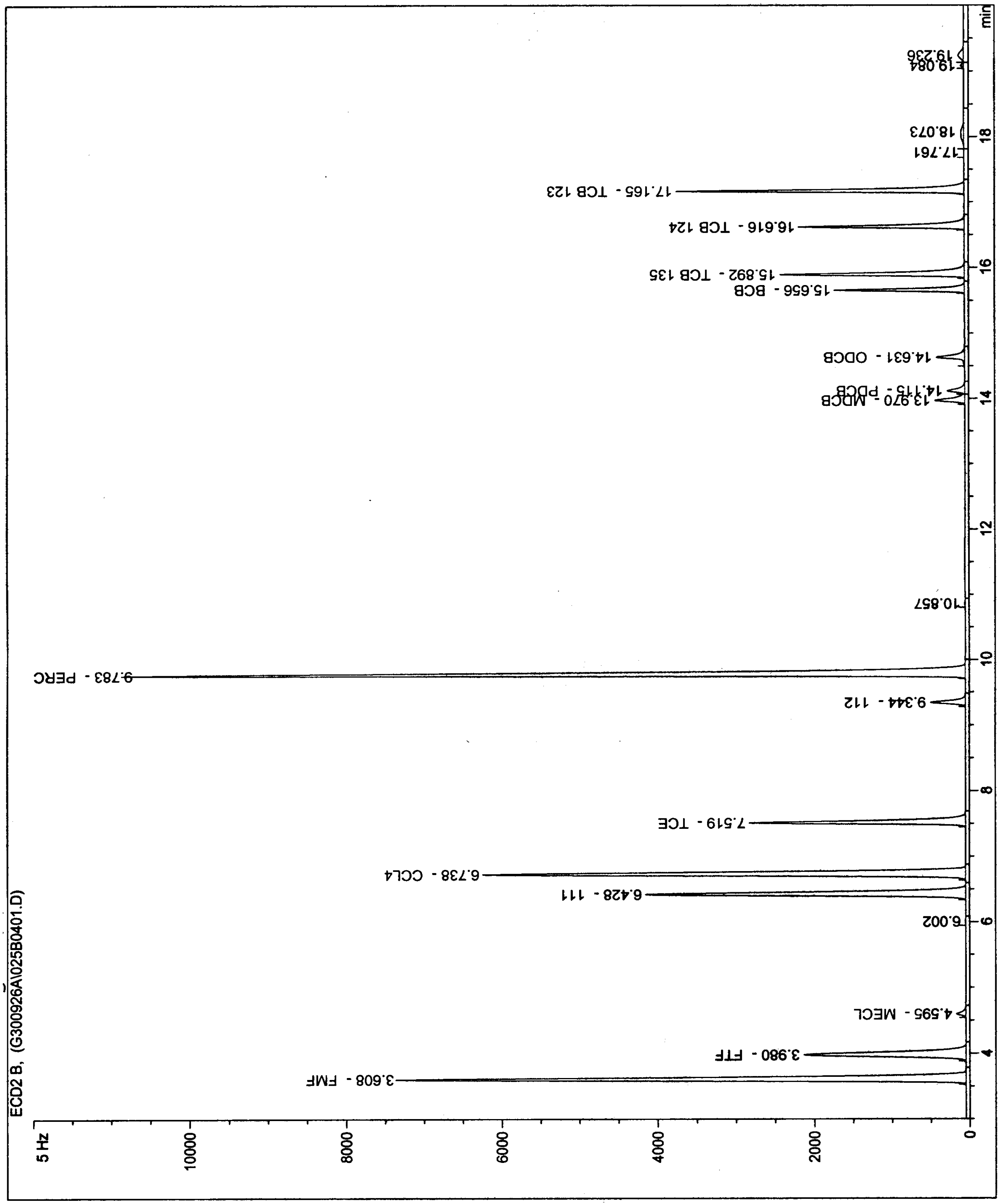
20-minute Temperature Program with and without EPC

#	Analyte	Code	Approximate Retention Times EPC (min.)	non-EPC (min.)
1.	Trichlorofluoromethane	FMF	3.6	3.7
2.	1,1,2-Trichloro-1,2,2-Tricfluoroethane	FTF	4.0	4.1
3.	Methylene Chloride	MECL	4.6	4.8
4.	1,1,1-Trichloroethane	111	6.4	6.9
5.	Carbon Tetrachloride	CCL4	6.7	7.3
6.	Trichloroethylene	TCE	7.5	8.2
7.	1,1,2-Trichloroethane	112	9.3	10.3
8.	Tetrachloroethene	PERC	9.8	10.8
9.	1,3-Dichlorobenzene	MDCB	14.0	15.6
10.	1,4-Dichlorobenzene	PDCB	14.1	15.7
11.	1,2-Dichlorobenzene	ODCB	14.6	16.3
12.	4-Bromochlorobenzene	BCB	15.7	17.4
13.	1,3,5-Trichlorobenzene	TCB3	15.9	17.7
14.	1,2,4-Trichlorobenzene	TCB1	16.6	18.5
15.	1,2,3-Trichlorobenzene	TCB2	17.1	19.1

APPENDIX B

CCS Chromatogram

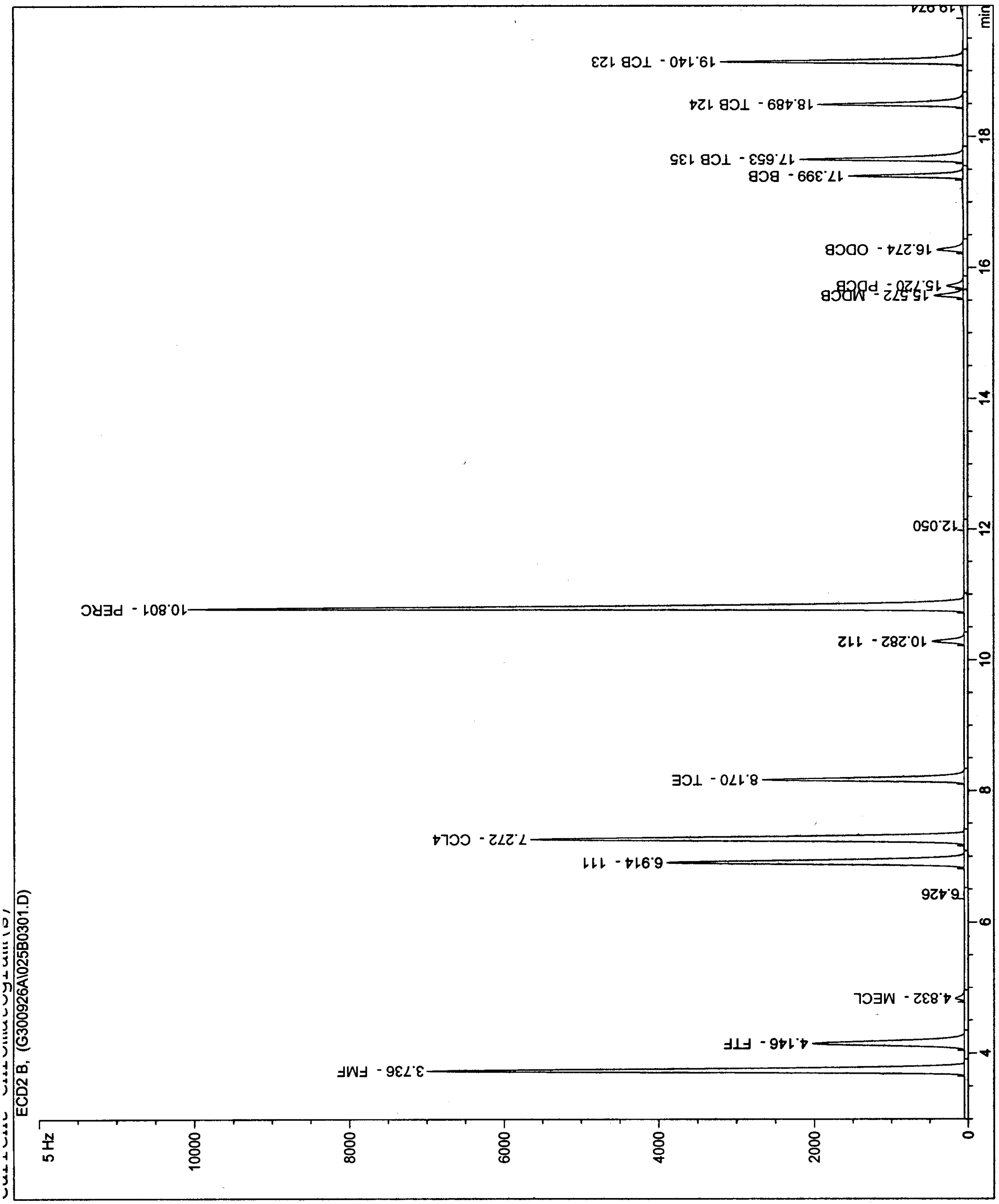
20-minute Temperature Program with EPC



APPENDIX C

CCS Chromatogram

20-minute Temperature Program without EPC



APPENDIX D

Preparation of Multi-Point HVOC Standards Using SMI Pipettors

SMI Pipettors (positive displacement) are designed to deliver microliter volumes of liquids to a high degree of accuracy and precision. A complete series of calibration standards can be prepared quickly and accurately with these pipettors in the GC autosampler vials, in one step, without the use of volumetric glassware (e.g. class A pipets and volumetric flasks). The final volume of 1.5 mL (1500 µL) fills the 2 mL GC vial enough to assure being taken up by the autosampler syringe and yet leaves enough headspace in the vial to avoid the creation of a vacuum when the solution is removed (as can happen with a completely filled vial). The following table gives the volumes of 100 µg/mL HVOC Stock Standard and diluent required to generate the concentrations used to calibrate instruments under SK 9209 (the SOP requires only 5 calibration concentrations):

Preparation of Initial Calibration Standards with SMI Pipettors					
Volume of 100 µg/mL HVOC Stock Standard	**Volume of Isooctane (µL)**	**Final Volume (µL)**	**Final Conc. of Calibration Std (µg/mL)**	**Final Conc. of MECL (µg/mL)**	**Final Conc. of FMF & CCL4 (µg/mL)**
30	1470	1500	2.0	5.0	1.0
60	1440	1500	4.0	10.0	2.0
75	1425	1500	5.0	12.5	2.5
150	1350	1500	10.0	25.0	5.0
300	1200	1500	20.0	50.0	10.0
450	1050	1500	30.0	75.0	15.0
600	900	1500	40.0	100	20.0
750	750	1500	50.0	125	25.0
1050	450	1500	70.0	175	35.0

Volumes which exceed the capacity of the SMI pipettor can easily be made by multiple aliquots of a smaller volume. For example, 900 µL can be obtained by pipetting (2 × 250 µL) + (2 × 200 µL). In certain cases, it may be advantageous to pipet the full 1500 µL of isooctane into the GC vial and then subtract a volume of solvent equivalent to the volume of 10µg/mL Stock standard to be added. For example, to make the 2.0 µg/mL calibration standard, use the SMI pipettor to deliver 1500 µL isooctane to the GC vial (6 × 250 µL), then, using a 50 µL syringe, remove 30 µL of solvent, and, using the same 50 µL syringe, add 30 µL of the 10µg/mL stock standard to the vial. Crimp-cap and mix each standard well by inverting the GC vial several times.

APPENDIX E

Low-Level HVOC Analysis of Virgin and Recycled Premium Gold Solvent (PGS)

For Demonstrating Conformance with SK Manufacturing Specifications

E.1 Scope and Application

E.1.1 This procedure is for the determination of low-level HVOCs for demonstrating conformance with Safety-Kleen's confidential manufacturing specifications for Premium Gold Parts Washer Solvent (PGS) as given in SK 3104. These specifications are given in Table E.1 below. The 32-min. temperature program, specifically developed for this application, yields baseline separation between the *meta*- and *para*-DCB isomers, as well as resolving common interferences from the *p*-DCB peak, and is mandatory for this application.

Table E.1

Target Analyte List				
Analyte	**SK Code**	**SK 3104 Spec**	**EPA Haz Waste No.**	**Regulatory Limit (40 CFR 261.24)**
Methylene Chloride	MECL	1.0 mg/L	–	–
1,1,1-Trichloroethane	111	1.0 mg/L	–	–
Trichloroethylene	TCE	0.4 mg/L	D040	0.5 mg/L
Tetrachloroethylene	PERC	0.4 mg/L	D039	0.7 mg/L
p-Dichlorobenzene	PDCB	5.0 mg/L	D027	7.5 mg/L

E.1.2 This appendix does not purport to include all of the procedural and instrumental details required to implement the analysis of volatile organic compounds by gas chromatography / electron capture detection (GC/ECD). Rather, this appendix addresses only the procedural details which differ from those in the main body of this SOP; all other analytical details are identical to those given in the SOP. When analyzing samples under this appendix, the following sections supercede the corresponding sections in the body of the SOP, and, taken together, they provide a complete analytical procedure.

E.2 Apparatus

E.2.1 All of the apparatus employed in this appendix (e.g., instrumentation and the analytical column) is identical to that given in Section 6 of the main body of this SOP.

E.3 Reagents and Standards

NOTE Although the analytical standards given in Section 7 of the main body of the SOP contain fourteen (14) analytes (as well as the surrogate), only the five (5) analytes of concern (i.e., MECL, 111, TCE, PERC, and PDCB) need be calibrated or included in any performance tracking systems when used in this Appendix.

E.3.1 Low-Level Initial Calibration Standards – Prepare a Low-Level Intermediate Stock Standard at a concentration of 10 µg/mL as in section 7.9, or by diluting 100 µL (0.100 mL) of 10,000 µg/mL Stock Standard to 100 mL with isooctane. Then, follow the dilution scheme given in Table E.2 below to prepare the working calibration standards.

Table E.2

Low- Level Working Calibration Standards				
Volume of 10 µg/mL Int. Stock Std. (mL)	**Final Volume of Cal. Std. (mL)**	**Final Conc. of Cal. Std. (µg/mL)**	**Final Conc. of MECL (µg/mL)**	**Final Conc. of FMF & CCL4 (µg/mL)**
1	50	0.20	0.5	0.10
1	25	0.40	1.0	0.20
1	10	1.0	2.5	0.50
2	10	2.0	5.0	1.0
3	10	3.0	7.5	1.5
4	10	4.0	10.0	2.0
5	10	5.0	12.5	2.5

See Table E.7 for a standard preparation scheme using SMI micro-pipettes.

E.3.2 Low-Level Calibration Check Standard (CCS) – Dilute the 20 µg/mL CCS given in Section 7.10 by a factor of 10 (e.g., 1 mL made up to 10 mL) with isooctane. This gives a low-level CCS at a concentration of 2.0 µg/mL, which is at the midpoint of the calibration standards given in Table E.2 above.

E.3.3 Low-Level Surrogate Spiking Standard – Dilute the 60,000 µg/mL Surrogate Standard given in Section 7.11. by a factor of 100 (e.g., 1 mL made up to 100 mL) with isooctane (a little acetone will facilitate the miscibility of the methanol in the isooctane). This gives a low-level surrogate spiking solution concentration of 600 µg/mL. Using this standard and following the spiking instructions for neat samples given in Section 11.1.2 of the SOP, results in a surrogate instrument concentration of 2.0 µg/mL.

E.3.4 Low-Level Matrix Spiking (MS) Laboratory Control Sample (LCS) Standard – Dilute the 4,000 µg/mL Matrix Spiking Standard given in Section 7.12 by a factor of 50 (e.g., 1 mL made up to 50 mL) with isooctane. This gives a low-level MS Spiking solution at a concentration of 80 µg/mL. Following the spiking instructions for neat samples given in Section 11.1.3 of the SOP results in an instrument concentration of 2.58 µg/mL for 111 and 7.75 µg/mL for MECL (*o*-DCB is not evaluated nor tracked).

E.4 Quality Control

E.4.1 Initial Calibration – The instrument calibration consists of at least five (5) concentrations, typically at the concentrations given in Section E.3.1. The calibration data may be modeled with either a linear (first order) or a quadratic (second order) curve fit. The correlation coefficient of the calibration model must be ≥ 0.99 for each analyte to demonstrate acceptable "goodness-of-fit." The regression analysis must be *unweighted* and the origin must be *ignored* (not *included* or *forced*). Recalibration is required only when the Calibration Check Standard criteria cannot be met.

E.4.2 Calibration Verification – Every analytical batch (EAB) or every twenty (20) samples, whichever results in a greater frequency, the instrument calibration must be verified by the analysis of a calibration check standard (CCS). The QC acceptance criteria for the CCS is that the *average* percent difference of all of the analytes in the CCS (including the surrogate) must be ≤ 15 % different from the initial calibration. Use the absolute values of the individual percent differences to calculate the average percent difference. If the CCS results indicate that the calibration is outside the control limits, and corrective actions do not correct the problem, then the instrument *must* be recalibrated.

E.4.3 Surrogate Standard – The surrogate standard, 4-Bromochlorobenzene (BCB), must be added to all Sample, Method Blank, Matrix Spike, and Matrix Spike Duplicate preparations. BCB must elute between 21.6 – 22.2 minutes on EPC instruments and between 23.5 – 24.1 minutes on non-EPC instruments (using the 32-minute temperature program). The control limits for the surrogate standard are 70 – 130 % recovery.

E.4.4 Method Blanks – Every preparation batch of ≤ 20 samples, a method blank must be prepared and analyzed by processing a hexane blank through the same dilution scheme and clean-up as that used for the samples. The QC acceptance criterion for method blanks is as given in the Safety-Kleen Quality Assurance Manual.

E.4.5 Matrix Spikes and Matrix Spike Duplicates (MS/MSD) – Every twenty (20) samples, a matrix spike and matrix spike duplicate pair must be prepared and analyzed. These spiked samples are used to generate both accuracy (Percent Recovery) and precision (Relative Percent Difference) data. The control limits for the MS/MSD are given in Table E.3 below:

Table E.3

MS/MSD Control Limits			
Analyte	**Code**	**Accuracy % Recovery**	**Precision % RPD**
Methylene Chloride	MECL	50-130%	≤ 20%
1,1,1-Trichloroethane	111	70-140%	≤ 20%

If the native concentration of any matrix spike compound exceeds five times the matrix spiked concentration in the final dilution, then the matrix spike recoveries are marked with “matrix interference” and are not included in any performance tracking systems.

E.4.6 Laboratory Control Sample (LCS) – Every twenty (20) samples, a Laboratory Control sample must be prepared and analyzed. A laboratory Control sample is a "spiked blank" using the same spiking solution as is used to spike the MS/MSD samples. These control samples are used to demonstrate the performance of the entire method (preparation and instrumentation) without the influence of the sample matrix. The control limits for the LCS are 70 – 130 percent recovery.

E.4.7 Quality Control Charts – Computer generated quality control charts plotting the percent recoveries of 111 and MECL obtained from the Laboratory Control Sample (LCS) analyses shall be updated daily and printed monthly.

E.5 Procedure

E.5.1 Sample Preparation – Samples are analyzed neat, this is, samples are not diluted for analysis. Transfer 30 mL of sample to a 40 mL screw-cap vial, spike with 100 µL (0.100 mL) of the 600 µg/mL surrogate spiking solution and mix. Transfer to a GC vial for analysis.

E.5.2 Method Blanks – Pipet or transfer 30 mL of the hexane diluent used to prepare samples, to a 40 mL vial and spike with 100 µL (0.100 mL) of the 600 µg/mL surrogate spiking solution and mix. Transfer to a GC vial for analysis.

E.5.3 Instrumental Analysis – All of the instrumental analytical procedures (e.g., instrument calibration, calibration verification, sample analytical sequences, and qualitative and quantitative analysis, etc.) are the same as those given in Section 11 of the main body of the SOP.

E.5.3.1 Gas Chromatographic Conditions – The GC parameters (e.g., injection volume, split flows, injection port and detector temperatures, etc.) are identical to those given in section 11.3.1 of the body of the SOP except for the GC oven temperature program which is given below. The column flow rate (column head pressure) must be set so that the surrogate standard, BCB, elutes between 21.6 – 22.2 minutes on EPC instruments, and between 23.5 – 24.1 minutes on non-EPC instruments. Typical analyte retention times are given in Table E.4, and example CCS chromatograms analyzed under these conditions, with and without EPC, are given in Tables E.5 and E.6 respectively.

E.5.3.2 Thirty Two (32) Minute Temperature Program (EPC and non-EPC Instruments):

Initial Temperature	45°C
Initial Time	1.0 minute
First Ramp:	
Ramp Rate	6 C°/min.
Final Temperature	165°C
Final Time	0 minutes
Second Ramp:	
Ramp Rate	20 C°/min.
Final Temperature	275°C
Final Time	5.5 minutes

The final holding time may be extended to "bake-out" the column between analyses.

E.6 Qualitative Analysis

E.6.1 **Compound Identification** – Target analytes are identified by absolute peak retention time. Chromatographic control is demonstrated for every analysis by obtaining a retention time for the surrogate standard within its control window. Chromatographic peaks which then fall within the target analyte retention time windows are identified as target analytes. Analyte elution order and typical retention times are given in Table E.4 for EPC instruments using the 32-minute temperature program.

E.6.2 **ESTD Quantitation** – Once a target analyte is identified, it is quantitated by the External Standard (ESTD) method of quantitation. The raw data file is processed against the multipoint calibration table (under *Report Generation* routines in HP ChemStation). The data system will use the retention time windows and peak picking parameters specified in the method to identify and integrate the chromatographic peaks. The areas generated by this process will be compared to the areas in the calibration table and quantitative results generated (i.e., *mathematical interpolation*). These results will be in the same units as those used for the calibration standards, µg/mL, and are the *Instrument Concentrations*.

> **NOTE: Extrapolation of the calibration curve to concentrations above or below those of the actual multipoint calibration standards can lead to significant quantitative errors and is not permitted. If the instrument concentration exceeds the calibration range of the instrument and quantitation is still required, the extract must be further diluted and reanalyzed within the calibration range or reported as greater than the concentration of the highest calibration standard.**

E.7 Quantitation

E.7.1 **Samples Analyzed Neat** – Analyte concentrations for samples analyzed neat (undiluted) are the same as their instrument concentrations and need no further calculation. Since the instrument concentrations of the calibration standards are expressed in µg/mL (equivalent to mg/L), these are also the units the sample concentrations are express in.

E.7.2 **Samples Analyzed Diluted** – Analyte concentrations for diluted samples are equal to their instrument concentrations multiplied by their dilution factors, and are reported in units of mg/L or µg/mL (each equivalent to “ppm”).

TABLE E.4

Low-Level Analysis
Typical Analyte Retention Times
32-minute Temperature Program with and without EPC

#	Analyte	Code	APPROXIMATE RETENTION TIMES EPC (min.)	non-EPC (min.)
1.	Trichlorofluoromethane	FMF	3.7	3.8
2.	1,1,2-Trichloro-1,2,2-Tricfluoroethane	FTF	4.1	4.3
3.	Methylene Chloride	MECL	4.9	5.1
4.	1,1,1-Trichloroethane	111	7.3	7.8
5.	Carbon Tetrachloride	CCL4	7.8	8.3
6.	Trichloroethylene	TCE	8.9	9.6
7.	1,1,2-Trichloroethane	112	11.7	12.7
8.	Tetrachloroethene	PERC	12.3	13.5
9.	1,3-Dichlorobenzene	MDCB	19.0	21.1
10.	1,4-Dichlorobenzene	PDCB	19.3	21.3
11.	1,2-Dichlorobenzene	ODCB	20.1	22.2
12.	4-Bromochlorobenzene	BCB	21.9	23.8
13.	1,3,5-Trichlorobenzene	TCB3	22.3	24.2
14.	1,2,4-Trichlorobenzene	TCB1	23.4	25.3
15.	1,2,3-Trichlorobenzene	TCB2	24.1	26.1

TABLE E.5

CCS Chromatogram

32-minute Temperature Program with EPC

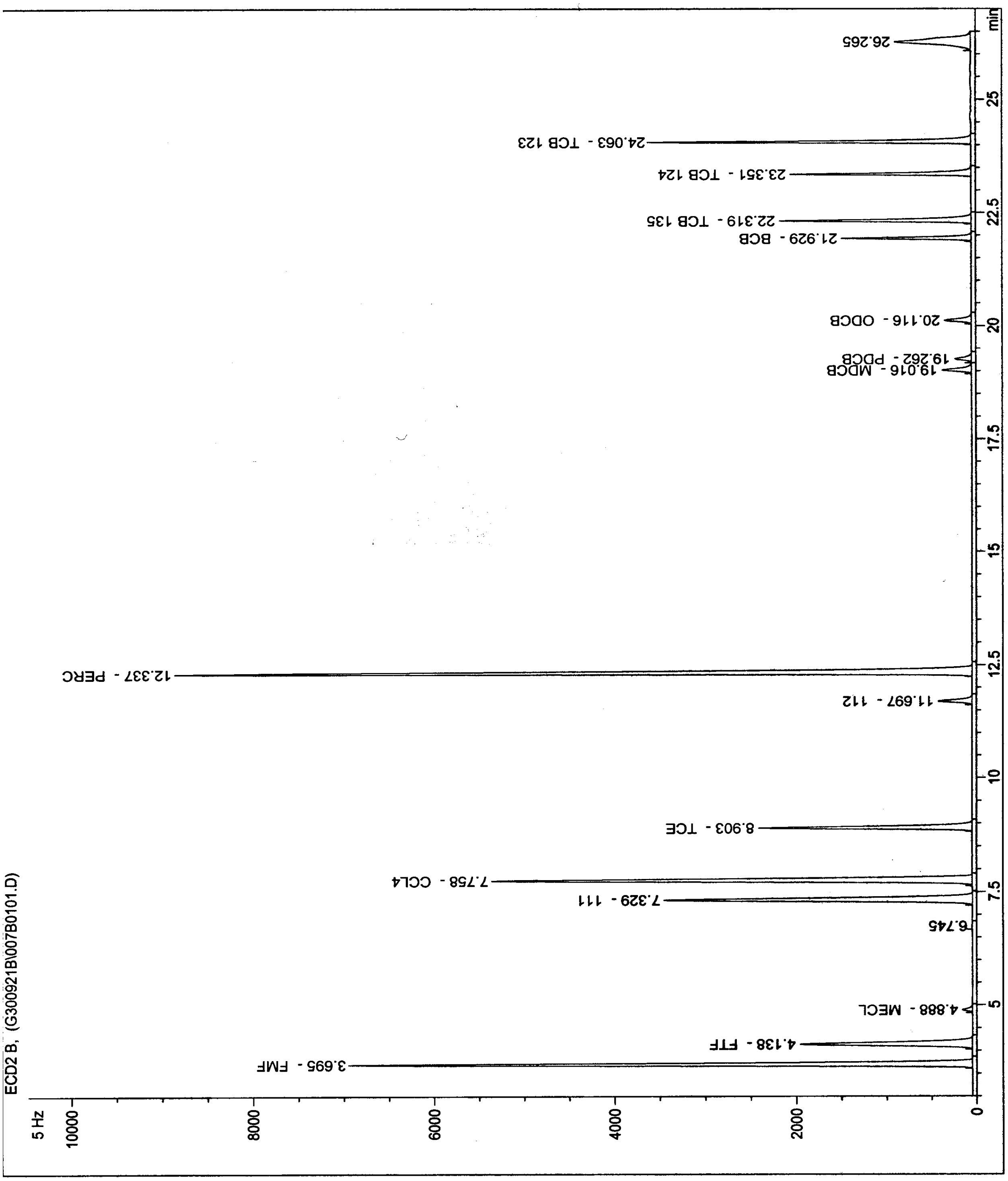


TABLE E.6
CCS Chromatogram
32-minute Temperature Program without EPC

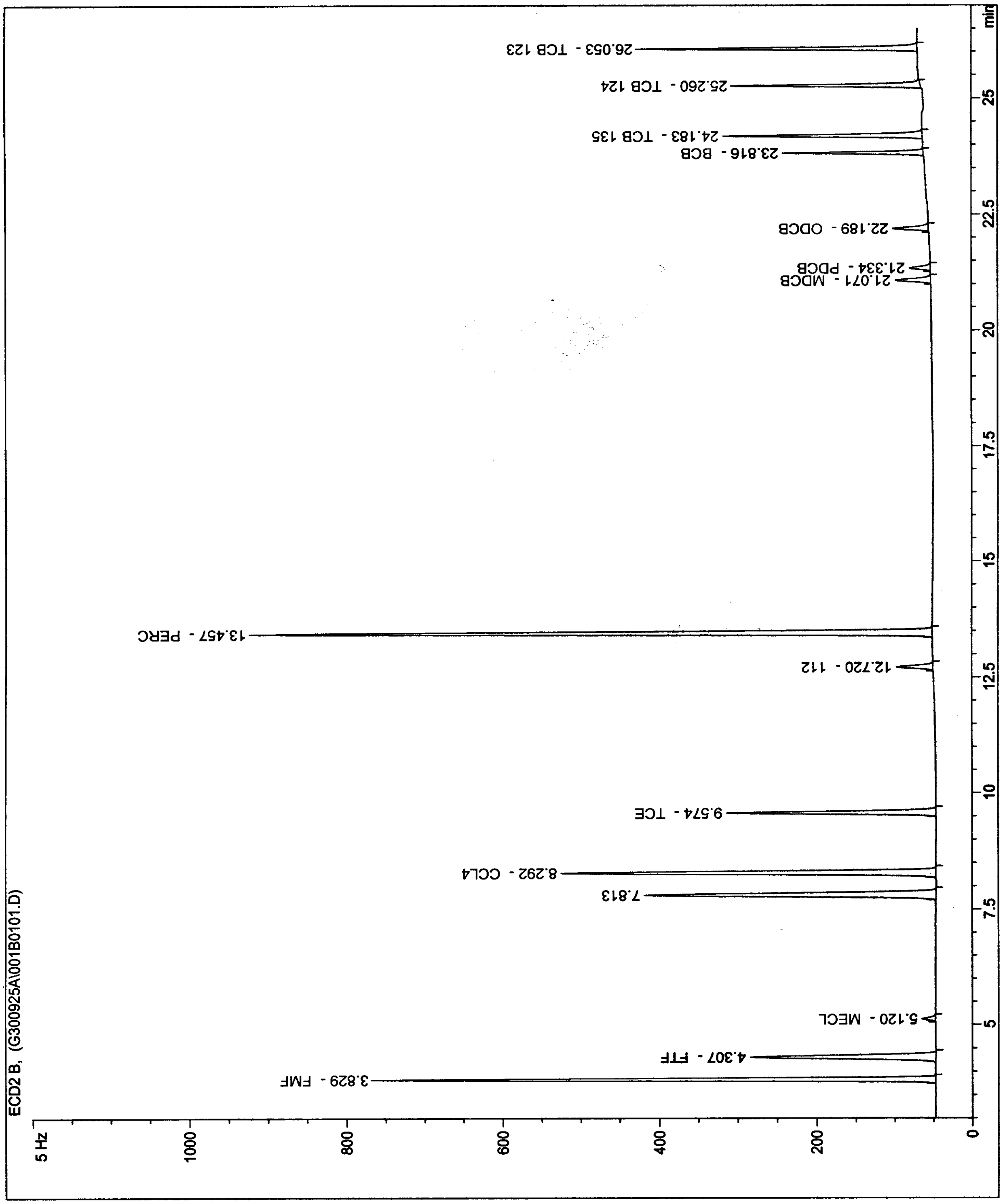


TABLE E.7

Preparation of Multi-Point HVOC Standards for Low-Level Analyses Using SMI Pipettors

SMI Pipettors (positive displacement) are designed to deliver microliter volumes of liquids to a high degree of accuracy and precision. A complete series of calibration standards can be prepared quickly and accurately with these pipettors in the GC autosampler vials, in one step, without the use of volumetric glassware (e.g. class A pipets and volumetric flasks). The final volume of 1.5 mL (1500 µL) fills the 2 mL GC vial enough to assure being taken up by the autosampler syringe and yet leaves enough headspace in the vial to avoid the creation of a vacuum when the solution is removed (as can happen with a completely filled vial). The following table gives the volumes of 10 µg/mL calibration standard and diluent required to generate the concentrations used to calibrate instruments under SK9209 Low Level HVOC analyses (the SOP requires only 5 calibration concentrations):

Preparation of Low-Level Initial Calibration Standards with SMI Pipettors					
Volume of 10 µg/mL HVOC Stock Standard	**Volume of Isooctane (µL)**	**Final Volume (µL)**	**Final Conc. of Calibration Std (µg/mL)**	**Final Conc. of MECL (µg/mL)**	**Final Conc. of FMF & CCL4 (µg/mL)**
30	1470	1500	0.20	0.50	0.10
60	1440	1500	0.40	1.00	0.20
150	1350	1500	1.00	2.50	0.50
300	1200	1500	2.00	5.00	1.00
450	1050	1500	3.00	7.50	1.50
600	900	1500	4.00	10.00	2.00
750	750	1500	5.00	12.50	2.50
900	600	1500	6.00	15.00	3.00
1200	300	1500	8.00	20.00	4.00
1500	0	1500	10.00	25.00	5.00

Volumes which exceed the capacity of the SMI pipettor can easily be made by multiple aliquots of a smaller volume. For example, 900 µL can be obtained by pipetting (2 × 250 µL) + (2 × 200 µL). In certain cases, it may be advantageous to pipet the full 1500 µL of isooctane into the GC vial and then subtract a volume of solvent equivalent to the volume of 0.5 µg/mL 1016/1260 standard to be added. For example, to make the 0.20 µg/mL calibration standard, use the SMI pipettor to deliver 1500 µL isooctane to the GC vial (6 × 250 µL), then, using a 50 µL syringe, remove 30 µL of solvent, and, using the same 50 µL syringe, add 30 µL of the 10µg/mL stock standard to the vial. Crimp-cap and mix each standard well by inverting the GC vial several times.

APPENDIX F

Low-Level HVOC Method for Analyzing Used SK Products For Four (4) Volatile Hazardous Contaminants Regulated Under the Toxicity Characteristic Given at 40 CFR 261.24

F.1 Scope and Application

F.1.1 This appendix describes Safety Kleen's Standard Operating Procedure for analyzing used Safety-Kleen Products (e.g., Anti-Freeze, Aqueous Brake Cleaner, Aqueous Parts Cleaner, and, Premium Solvent) for four (4) regulated volatile organic compounds (VOCs) pertinent to the toxicity characteristic given at 40 CFR 261.24. Table F.1 gives the method target analyte list, the TCLP regulation limits, and the corresponding EPA Hazardous waste codes. The quantitation limit is 0.10 mg/L (ppm).

F.1.2 This appendix does not purport to include all of the procedural and instrumental details required to implement the analysis of volatile organic compounds by gas chromatography / electron capture detection (GC/ECD). Rather, this appendix addresses only the procedural details which differ from those in the main body of this SOP; all other analytical details are identical to those given in the SOP. When analyzing samples under this appendix, the following sections supercede the corresponding sections in the body of the SOP, and, taken together, they provide a complete analytical procedure.

Table F.1

Target Analyte List				
Analyte	**SK Code**	**Aldrich Cat. #**	**EPA Haz Waste No.**	**Regulatory Limit (40 CFR 261.24)**
1,1-Dichloroethylene	VDC	25,140-2	D029	0.7 mg/L
Carbon Tetrachloride	CCL4	31,996-1	D019	0.5 mg/L
Trichloroethylene	TCE	25,140-2	D040	0.5 mg/L
Tetrachloroethylene	PERC	44,378-6	D039	0.7 mg/L
1,1,2,2-Tetrachloroethane (Surrogate)	1122	10,653-4	—	—

F.2 Apparatus

F.2.1 **Analytical Column** – Crosslinked 95% dimethyl-5% diphenyl polysiloxane 50 m × 0.32 mm × 1.0 µm film thickness (HP-5, DB-5, & Rtx-5). Or, Crossbonded phenylmethyl polysiloxane (specific ratio is a trade secret), 60 m × 0.32 mm ID × 1.8 µm film thickness. (Restek Rtx-502.2, Cat. # 10920, or, Phenomenex ZB-624, Cat. # 7KM-G005-31 (310-212-0555)).
[Rtx-502.2 column added to the method as per approved 02/05/05 change request JAU/272.]

F.3 Reagents and Standards

F.3.1 **Initial Calibration Standards** – The initial calibration standards contain all four target analytes plus the surrogate standard, 1,1,2,2-tetrachloroethane (1122), prepared from the neat compounds in isooctane. The instrument calibration range is purposefully designed to bracket the TCLP regulation limits for each analyte, and typically includes the following concentrations: 0.10 µg/mL, 0.25 µg/mL, 0.50 µg/mL, 0.75 µg/mL, 1.00 µg/mL, 1.20 µg/mL, and 1.50 µg/mL, although only 5 concentrations are required.

F.3.2 **Calibration Check Standard (CCS)** – The calibration check standard is an isooctane solution containing all four target analytes and the surrogate standard at a concentration of 0.75 µg/mL, and is prepared form the neat compounds independently from the initial calibration standards.

F.3.3 **Surrogate Spiking Standard** – The surrogate spiking standard is a solution of 1,1,2,2-Tetrachloroethane at a concentration of 75 µg/mL in either isooctane or methanol, depending on whether the solution is to be used for spiking organic or aqueous samples respectively. Spiking 9 mL of sample with 100 µL (0.100 mL) of this standard results in an instrument concentration of 0.833 µg/mL.

F.3.4 **Matrix Spike (MS) Laboratory Control Sample (LCS) Spiking Solution** – The MS/LCS spiking standard is a solution containing PERC and TCE at a concentration of 75 µg/mL in either isooctane or methanol, depending on whether the solution is to be used for spiking organic or aqueous samples respectively. The MS spiking standard should be prepared from the same stock solution as is used to prepare the initial calibration standards. (When preparing the aqueous MS/LCS spiking solution, the use of a little acetone will facilitate the solubility of the isooctane in the methanol.) Spiking 9 mL of sample with 100 µL (0.100 mL) of spiking standard results in an instrument concentration of 0.833 µg/mL.

F.4 Quality Control

F.4.1 **Initial Calibration** – The instrument calibration consists of at least five (5) concentrations, typically at the concentrations given in Section F.3.1. The calibration data may be modeled with either a linear (first order) or a quadratic (second order) curve fit. The correlation coefficient of the calibration model must be ≥ 0.99 for each analyte to demonstrate acceptable "goodness-of-fit." The regression analysis must be *unweighted* and the origin must be *ignored* (not *included* or *forced*). Recalibration is required only when the Calibration Check Standard criteria cannot be met.

F.4.2 **Calibration Verification** – Every analytical batch (EAB) of twenty (20) samples or less, the instrument calibration must be verified by the analysis of a calibration check standard (CCS). The QC acceptance criteria for the CCS is that the *average* percent difference of all of the analytes in the CCS (including the surrogate) must be ≤ 15 % different from the initial calibration. Use the absolute values of the individual percent differences to calculate the average percent difference. A CCS must also be analyzed at the end of every analytical sequence, so that all sample analyses are bracketed by in-control analyses of the CCS. If the CCS results indicate that the calibration is outside the control limits, and corrective actions do not correct the problem, then the instrument *must* be recalibrated.

F.4.3 Method Blanks – Every preparation batch of ≤ 20 samples, a method blank must be prepared and analyzed by processing a hexane blank through the same dilution scheme and clean-up as that used for the samples. The QC acceptance criterion for method blanks is as given in the Safety-Kleen Quality Assurance Manual.

F.4.4 Surrogate Standard – The surrogate standard, 1,1,2,2-Tetrachloroethane, must be added to all method blank, sample, MS/MSD, and LCS preparations. 1122 must elute between 9.0 and 9.6 minutes using the 15 minute temperature program and EPC. The control limits for the surrogate standard are 70 – 130 percent recovery for organic matrices and 64 – 136 percent recovery for aqueous matrices.

F.4.5 Matrix Spikes and Matrix Spike Duplicates (MS/MSD) – Every month a matrix spike/matrix spike duplicate pair must be prepared and analyzed. These spiked samples are used to generate both accuracy (Percent Recovery) and precision (Relative Percent Difference) data. The control limits for the Premium Solvent MS/MSD are given in Table F.2 below:

Premium Solvent Table F.2

MS/MSD Control Limits			
Analyte	**SK Code**	**Accuracy % Recovery**	**Precision % RPD**
1,1-Dichloroethylene	VDC	46 % – 154 %	≤ 20%
Carbon Tetrachloride	CCL4	73 % – 127 %	≤ 20%
Trichloroethylene	TCE	74% – 126 %	≤ 20%
Tetrachloroethylene	PERC	66 % – 134 %	≤ 20%

If the native concentration of any matrix spike compound exceeds five times the matrix spiked concentration in the final dilution, then the matrix spike recoveries are marked with “matrix interference” and are not included in any performance tracking systems.

The control limits for the Aqueous Solvent MS/MSD are given in Table F.3 below:

Aqueous Solvent Table F.3

MS/MSD Control Limits			
Analyte	**SK Code**	**Accuracy % Recovery**	**Precision % RPD**
1,1-Dichloroethylene	VDC	47 % – 153 %	≤ 20%
Carbon Tetrachloride	CCL4	45 % – 155 %	≤ 20%
Trichloroethylene	TCE	63% – 137 %	≤ 20%
Tetrachloroethylene	PERC	40 % – 160 %	≤ 20%

If the native concentration of any matrix spike compound exceeds five times the matrix spiked concentration in the final dilution, then the matrix spike recoveries are marked with “matrix interference” and are not included in any performance tracking systems.

F.4.6 Laboratory Control Samples (LCS) – Every twenty (20) samples a Laboratory Control Sample must be prepared and analyzed. A laboratory Control sample is a "spiked blank" prepared in hexane using the same spiking solution as is used to spike the MS/MSD samples. These control samples are used to demonstrate the performance and control of the entire method (preparation and instrumentation) without the influence of the sample matrix. The control limits for the Premium Solvent LCS are given in Table F.4 below:

Premium Solvent Table F.4

LCS Control Limits			
Analyte	**SK Code**	**Accuracy % Recovery**	**Precision % RPD**
1,1-Dichloroethylene	VDC	81 % – 119 %	≤ 20%
Carbon Tetrachloride	CCL4	80 % – 120 %	≤ 20%
Trichloroethylene	TCE	78% – 122 %	≤ 20%
Tetrachloroethylene	PERC	76% – 124 %	≤ 20%

The control limits for the Aqueous Solvent LCS are given in Table F.5 below:

Aqueous Solvent Table F.5

LCS Control Limits			
Analyte	**SK Code**	**Accuracy % Recovery**	**Precision % RPD**
1,1-Dichloroethylene	VDC	51 % – 149 %	≤ 20%
Carbon Tetrachloride	CCL4	57 % – 143 %	≤ 20%
Trichloroethylene	TCE	63% – 137 %	≤ 20%
Tetrachloroethylene	PERC	40% – 160 %	≤ 20%

F.4.7 Quality Control Charts – Computer generated quality control charts plotting the percent recoveries of TCE and PERC obtained from the Laboratory Control Sample (LCS) analyses, shall be updated daily and printed monthly.

F.5 Procedure

F.5.1 Sample Preparation

F.5.1.1 Organic Matrices

F.5.1.1.1 Samples – Organic samples are analyzed neat, that is, no sample dilution is required nor generally implemented. Transfer 9 mL of sample to a 20 mL screw-cap vial, spike with 100 µL (0.100 mL) of the 75 µg/mL organic (isooctane) surrogate spiking solution and mix. Add approximately 3 mL of sulfuric acid and vortex. Further sulfuric acid clean-ups may be employed as needed. Samples may then be centrifuged to ensure a clean separation from the acid. Transfer ~1.5 – 2 mL of the hexane (upper) layer to a GC vial for analysis.

F.5.1.1.2 Method Blanks – Transfer 9 mL of hexane to a 20 mL screw-cap vial, spike with 100 µL of the 75 µg/mL organic surrogate spiking solution and mix. Add approximately 3 mL of sulfuric acid and vortex. Transfer to a GC vial for analysis.

F.5.1.1.3 Matrix Spikes – Transfer 9 mL of sample to a 20 mL screw-cap vial and spike with 100 µL each of the 75 µg/mL organic surrogate spiking solution and the 75 µg/mL organic matrix spiking solution and mix. Subject to the acid clean-up and transfer to a GC vial for analysis.

F.5.1.1.4 Laboratory Control Samples (LCS) – Transfer 9 mL of hexane to a 20 mL screw-cap vial and spike with 100 µL each of the 75 µg/mL organic surrogate spiking solution and the 75 µg/mL organic matrix spiking solution and mix. Subject to the acid clean-up and transfer to a GC vial for analysis.

F.5.1.2 Aqueous Matrices

F.5.1.2.1 Samples – Aqueous samples (e.g., Anti-Freeze, Aqueous Brake Cleaner, & Aqueous Parts Cleaner) are extracted with hexane at a ratio of 1:1. Transfer 9 mL of sample to a 20 mL screw-cap vial, spike with 100 µL (0.100 mL) of the 75 µg/mL aqueous (methanolic) surrogate spiking solution and mix. Add 9 mL of hexane and gently agitate (vigorous agitation such as vortexing can cause emulsions to form which are difficult to break). The sample may be centrifuged to ensure a clean separation of the hexane extract from the aqueous phase. Transfer most of the hexane (upper) layer to another 20 mL vial and treat with 3 mL of sulfuric acid. Centrifuge again if necessary and transfer ~1.5 – 2 mL of the hexane (upper) layer to a GC vial for analysis.

F.5.1.2.2 Method Blanks – Transfer 9 mL of reagent water to a 20 mL screw-cap vial and spike with 100 µL of the 75 µg/mL aqueous surrogate spiking solution and mix. Add 9 mL of hexane and gently agitate. Transfer most of the hexane (upper) layer to another 20 mL vial and treat with 3 mL of sulfuric acid. Transfer ~1.5 – 2 mL of the hexane (upper) layer to a GC vial for analysis.

F.5.1.2.3 Matrix Spikes – Transfer 9 mL of sample to a 20 mL screw-cap vial and spike with 100 µL each of the 75 µg/mL aqueous surrogate spiking solution and the aqueous matrix spiking solution, and mix. Add 9 mL of hexane and gently agitate. Centrifuge if necessary. Transfer most of the hexane (upper) layer to another 20 mL vial and treat with 3 mL of sulfuric acid. Centrifuge again if necessary and transfer to a GC vial for analysis.

F.5.1.2.4 Laboratory Control Samples (LCS) – Transfer 9 mL of reagent water to a 20 mL screw-cap vial and spike with 100 µL each of the 75 µg/mL aqueous surrogate spiking solution and the aqueous matrix spiking solution and mix. Add 9 mL of hexane and gently agitate. Centrifuge if necessary. Transfer most of the hexane (upper) layer to another 20 mL vial and treat with 3 mL of sulfuric acid. Centrifuge again if necessary and transfer to a GC vial for analysis.

F.5.2 Instrumental Analysis – All of the instrumental analytical procedures (e.g., instrument calibration, calibration verification, sample analytical sequences, and qualitative and quantitative analysis, etc.) are the same as those given in Section 11 of the main body of the SOP.

F.5.2.1 Gas Chromatographic Conditions – The GC parameters (e.g., injection volume, carrier gas, split ratio and flows, etc.) are identical to those given in section 11.3.1 of the body of the SOP except as given below. The column flow rate (column head pressure) must be set so that the surrogate standard, 1122, elutes between 9.0 – 9.6 minutes using the 15 minute temperature program and EPC on either column. Typical analyte retention times are given in Table F.3 and an example CCS chromatogram, analyzed under these conditions (with EPC), is given in Tables F.4.

Injection Port Temperature	280°C
Detector Temperature	325°C

F.5.2.2 Fifteen (15) Minute Temperature Program (EPC Instruments):

Initial Temperature	60°C
Initial Time	1.0 minute
First Ramp:	
Ramp Rate	10 C°/min.
Final Temperature	165°C
Final Time	0 minutes
Second Ramp:	
Ramp Rate	70 C°/min.
Final Temperature	280°C
Final Time	1.86 minutes

The final holding time at 280°C may be extended to "bake-out" the column between analyses.

Table F.3

Analyte Retention Times			
Analyte	**SK Code**	**Rtx-502.2 Apprx RT (w/ EPC) Min.**	**HP-5, DB-5, & Rtx-5 Apprx RT (w/ EPC) Min.**
1,1-Dichloroethylene	VDC	2.5	3.8
Carbon Tetrachloride	CCL4	4.1	5.3
Trichloroethylene	TCE	4.8	5.8
Tetrachloroethylene	PERC	6.6	7.6
1,1,2,2-Tetrachloroethane	1122	9.2	9.3

Table F.4A
CCS Chromatogram
Rtx-5/DB-5/HP-5 Column
15-Minute Temperature Program with EPC

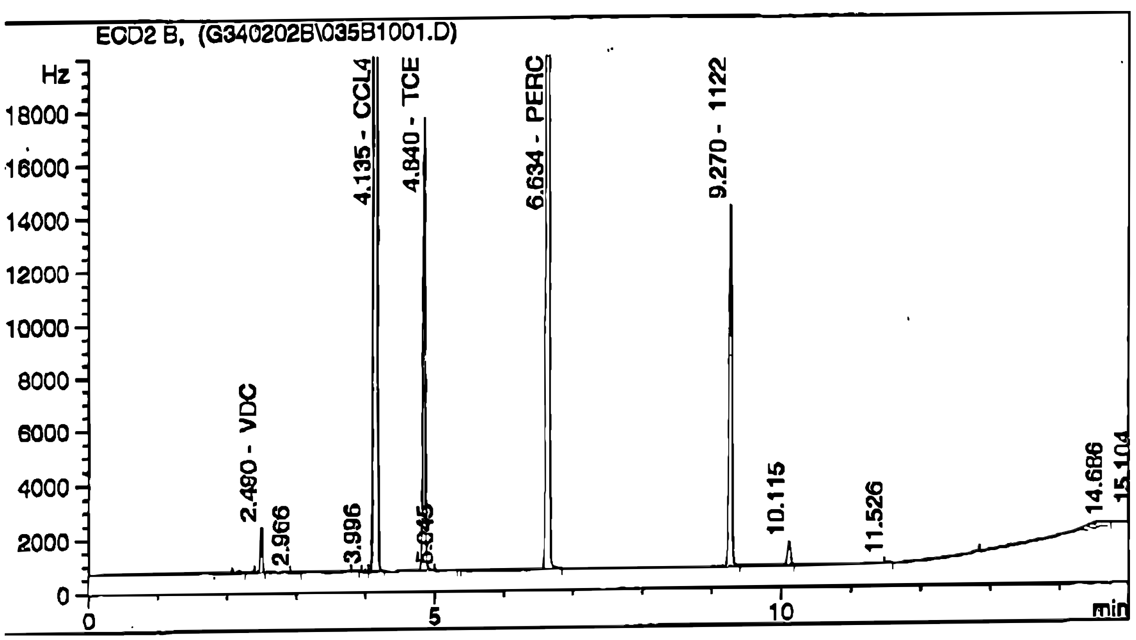
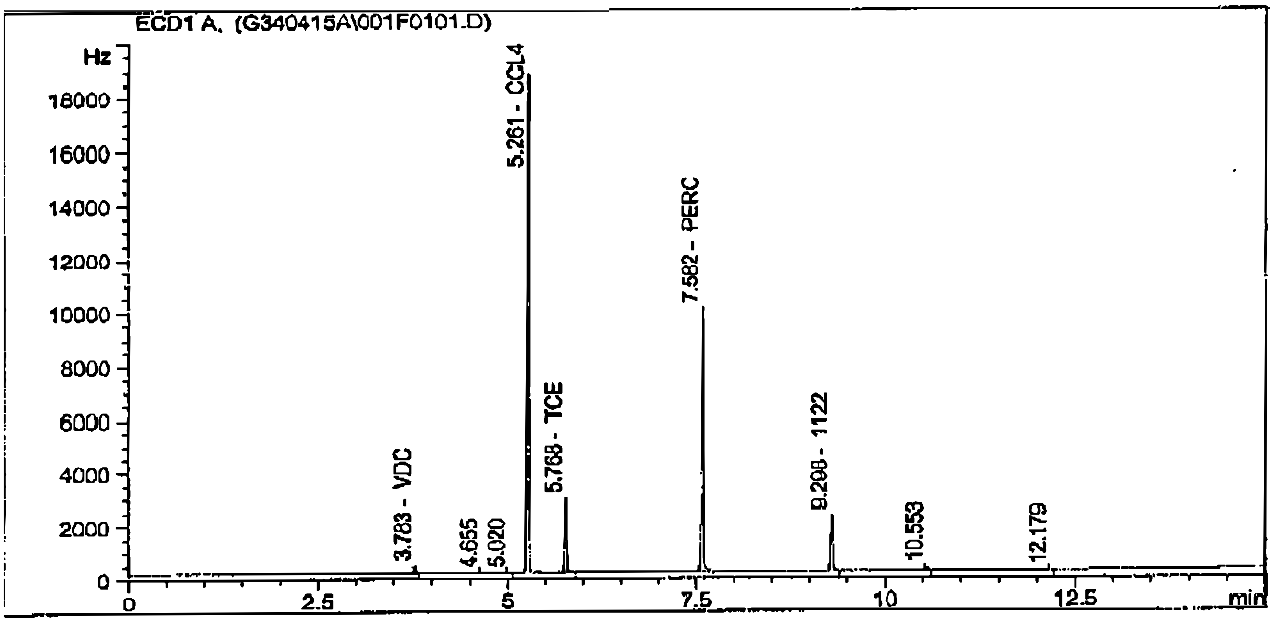


Table F.4B
CCS Chromatogram
Rtx-502.2 Column
15-Minute Temperature Program with EPC



F.6 Qualitative Analysis

F.6.1 **Compound Identification** – Target analytes are identified by absolute peak retention time. Chromatographic control is demonstrated for every analysis by obtaining a retention time for the surrogate standard within its control window. Chromatographic peaks which then fall within the target analyte retention time windows are identified as target analytes. Analyte elution order and typical retention times are given in Table F.3 for EPC instruments using the 15-minute temperature program.

F.6.2 **ESTD Quantitation** – Once a target analyte is identified, it is quantitated by the External Standard (ESTD) method of quantitation. The raw data file is processed against the multipoint calibration table (under *Report Generation* routines in HP ChemStation). The data system will use the retention time windows and peak picking parameters specified in the method to identify and integrate the chromatographic peaks. The areas generated by this process will be compared to the areas in the calibration table and quantitative results generated (i.e., *mathematical interpolation*). These results will be in the same units as those used for the calibration standards, μg/mL, and are the *Instrument Concentrations*.

NOTE: Extrapolation of the calibration curve to concentrations above or below those of the actual multipoint calibration standards can lead to significant quantitative errors and is not permitted. If the instrument concentration exceeds the calibration range of the instrument and quantitation is still required, the extract must be further diluted and reanalyzed within the calibration range or reported as greater than the concentration of the highest calibration standard.

F.7 Quantitation

F.7.1 **Samples Analyzed Neat** – Analyte concentrations for samples analyzed neat (undiluted) are the same as their instrument concentrations and need no further calculation. Since the instrument concentrations of the calibration standards are expressed in µg/mL (equivalent to mg/L), these are also the units the sample concentrations are express in.

F.7.2 **Samples Analyzed Diluted** – Analyte concentrations for diluted samples are equal to their instrument concentrations multiplied by their dilution factors, and are reported in units of mg/L or µg/mL (each equivalent to “ppm”).

TITLE: STANDARD OPERATING PROCEDURE FOR THE DETERMINATION OF SPECIFIC GRAVITY OF WASTE MATERIALS USING HYDROMETERS

(KEY WORDS: SPECIFIC GRAVITY, HYDROMETER)
(BASED ON: ASTM D 1298)

1. SCOPE AND APPLICATION

1.1 The hydrometer is used to screen waste material for the specific gravity at a temperature range of 60° to 80°F and the types of compounds that can possibly be expected to be found in the waste material.

1.2 Specific gravity results are used for billing purposes to convert the receipt weights to volumes.

1.3 Specific gravity results are used to help establish that the physical and chemical characteristics of the shipments are consistent with what was expected.

1.4 A specific gravity of greater than 1.00 is an indication of the presence of halogenated solvents in the sample.

1.5 A specific gravity of approximately 1.00 is an indication that the sample is mostly water.

1.6 A specific gravity of less than 1.00 is an indication of oils and /or flammable solvents in the sample.

2. SAFETY AND WASTE HANDLING

2.1 **Fire - Caution:** Some of the materials are highly flammable. Be sure that there are no open flames nearby while testing or cleaning is going on. The fumes released may be flammable and migrate to open flames.

Fire - If any spill occurs, wipe up with an absorbent wipe. Used wipes and plastic pipettes must be placed in a metal container lined with a plastic trash bag. The metal top must be kept on the container at all times except to add or to remove the contents. In the event of a fire, the top should quickly smother it. Any fires involving these materials must be treated as Class A fires. The contents must be removed daily and may be disposed of in the regular trash.

2.2 **Eye Contact** - Regular safety glasses with side shields provide adequate protection from an accidental sample splash.

2.3 **Hand Contact** - Use of disposable Nitrile gloves provide adequate protection from contact with the samples. All skin contact must be washed off immediately.

2.4 **Respiratory** - Exposure to the vapors from the sample should be kept to a minimum by working in a well-ventilated area. The sample container must be opened and tested in a hood, however the flow in the hood must be such that air currents do not affect the motion of the hydrometer. The sample must be removed from the original container only long enough to obtain an analysis.

Respiratory - A fitted respirator must be available for use in case of sample spills.

2.5 **Waste Disposal** - Samples taken to fill a test cylinder *may not be returned* to the original container *unless a requirement to do so is documented*. Sample aliquots used for determinations should be disposed of in the hazardous waste container.

3. SUMMARY OF METHOD

3.1 The buoyancy provided by a liquid is a function of its specific gravity. Hydrometers are used to take advantage of this relationship and directly read out the specific gravity when suspended in liquid samples.

4. SAMPLE HANDLING AND PRESERVATION

4.1 Samples must be stored at a temperature between 55°F and 90°F and conditioned to 60° to 80°F prior to testing. Short term elevated/reduced temperatures experienced during sample shipment will not significantly affect sample integrity.

4.2 Erroneous results may be obtained if precautions are not taken to avoid the loss of volatile material. Do not open containers unnecessarily. Results for samples from leaky containers must be marked to indicate that the sample integrity was not maintained during shipping/storage.

4.3 For routine samples, use a one (1) quart, wide mouth glass bottle with an outer plastic coating and a Teflon-lined cap. The bottle should be filled at least 75% full but not more than 90% full. This is adequate for all routine operational or preshipment qualification testing, including laboratory quality control.

4.4 For shipping or long-term storage, do not use plastic (polyethylene, polypropylene, etc.) containers; volatile material may diffuse through the walls of the bottle. Plastic containers may be used for process samples that will be analyzed within 24 hours.

4.5 A 100 mL specimen is required for each analysis.

5. INTERFERENCES

5.1 The limits of precision and accuracy for determining specific gravity depend upon the care given to the technique involved. Consideration must be given to the problems of keeping a consistent temperature. This can be minimized by storing the sample at room temperature for at least 1 hour for every 10 F° in temperature difference or by warming the sample. Adequate accuracy can be achieved (to two decimal places) if the samples are between 60° and 80°F.

5.2 Erroneous results may be obtained if precautions are not taken to avoid the loss of volatile material.

5.3 Erroneous results may be obtained if precautions are not taken to detect physical damage to the hydrometer tip or shifting of the scale.

5.4 Samples containing floating solids, a foam layer, or multi-phase liquids will give inaccurate results. Each phase must be separated and analyzed individually. Where this is impractical, Safety-Kleen method 9929 (apparent specific gravity and bulk density) should be considered.

5.5 Samples with high viscosities may not give accurate or reproducible results, because the hydrometer may never reach its equilibrium depth.

5.6 For opaque samples do not allow the hydrometer scale to become obscured.

6. APPARATUS

NOTE: Unless indicated as mandatory, all references to manufacturer and catalog number are provided as examples of acceptable items.

6.1 Hydrometers -

0.650 - 1.000, 170 mm x 12 mm, 0.010 Inc.
(Fisher Cat. No. 11-512D)

1.000 - 2.000, 170 mm x 12 mm, 0.020 Inc.
(Fisher Cat. No. 11-522D)

6.2 Narrow Range Hydrometers - Set of eight covering the range of 0.700 to 2.000. The hydrometers are 150 mm long and 12 mm in diameter. (OPTIONAL)

The set includes the following:

	Baxter Cat. No.
0.700 to 0.800 in 0.002	H8700-2
0.800 to 0.900 in 0.002	H8700-3
0.900 to 1.000 in 0.002	H8700-4
1.000 to 1.225 in 0.005	H8710-1
1.200 to 1.425 in 0.005	H8710-2
1.400 to 1.620 in 0.005	H8710-3
1.600 to 1.825 in 0.005	H8710-4
1.800 to 2.000 in 0.005	H8710-5

6.3 Hydrometer Cylinder - 38 mm diameter, 200 mm height
(VWR Cat. No.24629-092) or:

Graduated Cylinder - 29 mm diameter, 255 mm height
(VWR Cat. No. 24710-124)

6.4 Disposable Paper Wipes - Kimwipes 4.5" x 8.5"
(VWR Cat. No. 21905-025)

6.5 Disposable Gloves - N-Dex® 4 mil Nitrile Gloves, Mandatory. (Fisher Cat. # 11-388-32).

7. REAGENTS

Reagents must have the following clearly identified:	
Container: and/or	**Logbook:**
Description	**Description**
Source	**Source**
Lot #	**Lot #**
Purity	**Purity**
Date of Receipt	**Date of Receipt**
Date Opened	
NOTE: If purity is not known, record the grade.	

Standards and all solutions must have the following clearly identified:	
Container:	**Logbook:**
Description	**Standard/Solution Name**
Nominal Concentration	**Sources**
Date Prepared	**Lot #s**
Expiration Date	**Purities**
	Concentrations
	Preparer's Name
	Date of Preparation
	Expiration Date
NOTE: If purity is not known, record the grade.	

7.1 **Methyl Alcohol (Methanol)** - (CAS No. 67-56-1) for cleaning. d 0.791
(VWR Cat. No. VW4300 or JT9076)

7.2 **Acetone** - (CAS No. 67-64-1) for cleaning and as a Reagent. d 0.791
(VWR Cat. No. VW0330 or JT9006)

7.3 **p-Xylene** - 98%, (CAS No. 106-42-3), d 0.866
(VWR Cat. No. EMXX0045 or JTX528)

7.4 **Tetrachloroethylene** - (CAS No. 127-18-4), Reagent, d 1.623,
(VWR Cat.No.JT9465 or EM-TX0175)

7.5 **Water** - (CAS No. 7732-18-5), Milli-Q, d 1.000

7.6 **Dichloromethane (Methylene Chloride)** - Reagent,
(CAS No.75-09-2) d 1.325.
(VWR Cat.No. VW4525 or JT9264 or JT9315)

7.7 **2-Butoxyethanol** - Practical, (CAS No. 111-76-2), d 0.903
(VWR Cat. No. JTD648) "BUTYL CELLOSOLVE"

7.8 **1-Butanol** - A.C.S (CAS No. 71-36-3), d 0.810
(VWR Cat. No. EM-BX1780)

7.9 **Ethylene Glycol** - 99.8% (CAS No. 107-21-1), d 1.113,
(Baxter Cat. No. 5001-500NY)

8. PREVENTIVE MAINTENANCE

8.1 The hydrometers are not subject to significant wear or aging. The periodic (annual) checks are simply to confirm the reliability and accuracy of the hydrometers. Each shift/each use, perform a visual and tactile inspection of the hydrometers. If a hydrometer is damaged, it must be replaced.

8.2 Rinse the hydrometers with methanol and/or acetone after each sample to assure that residue does not build up on the contact surface. Wipe dry with a Kimwipe.

9. TROUBLE SHOOTING AND CORRECTIVE ACTION

9.1 The hydrometer will not read accurately if there is any change to its density. The two most common ways in which the density of the hydrometer will be changed is through the build up of residue on the hydrometer or missing glass through breaking and chipping.

9.2 The hydrometer will not read accurately if the scale has moved inside the stem.

9.3 The hydrometer will not read accurately if the temperature of the sample is not within the 60° to 80°F temperature range.

9.4 The hydrometer will not read accurately if the container used to measure the specific gravity in is too narrow or too shallow. The container must be at least 0.5 inch greater in diameter than the hydrometer; 1 inch is preferable, however, with care to assure that the hydrometer does not hang up on the wall, the narrower 100 mL graduated cylinder will give comparable results to those obtained from the wider hydrometer cylinder. The container must be at least 1 inch deeper than the depth to which the hydrometer sinks.

9.5 For samples containing multiple phases, a foam layer, or floating solids, the liquid phases must be separated and analyzed individually.

10. QUALITY CONTROL

10.1 **Duplicates -** The duplicate frequency requirement is one sample in twenty for laboratories analyzing less than 20 samples per day, or, daily for laboratories analyzing more than 20 samples per day. The acceptance criteria is ≤ 0.02 units (absolute) difference between duplicate analyses.

10.2 **Annually**: Evaluate the performance of the hydrometers using the indicated reference material. Record the result in the record for the hydrometer.

Nominal Range		
0.700-0.800	Acetone	0.791
0.800-0.850	1-Butanol	0.810
0.850-0.900	p-Xylene	0.866
0.900-0.950	2-Butoxyethanol	0.903
0.950-1.000	Water	1.000
1.000-1.050	Water	1.000
1.050-1.100		
1.100-1.150	Ethylene Glycol	1.113
1.150-1.200		
1.200-1.250		
1.250-1.300		
1.300-1.350		
1.350-1.400		
1.400-1.450	Dichloromethane	1.325
1.450-1.500		
1.500-1.550		
1.550-1.600		
1.600-1.650	Tetrachloroethylene	1.623

10.4 **New Hydrometers** - must be verified prior to use. A record must be established and maintained for each hydrometer. Adequate performance for the testing is within 0.02 of the expected value.

11. PROCEDURE

11.1 Cool/warm the sample in the original container to room temperature. Pour the sample into the clean and dry cylinder without splashing, so as to avoid formation of air bubbles. Remove any air bubbles from the liquid surface by touching them with a piece of clean paper. Remove any bubbles adhering to the inside cylinder wall by gently tapping the cylinder on a padded surface.

11.2 Select a location in a hood that is free of air currents that affect the hydrometer. Slowly and carefully lower the hydrometer into the sample to a level within approximately two smallest scale divisions of that at which it will float and then release the hydrometer.

11.3 If hydrometer sticks to wall of cylinder, it may be helpful to spin the hydrometer slightly to bring it to the center of the cylinder. After it has come to rest and floats freely away from the walls of the cylinder, read the specific gravity as the point at which the surface of the sample apparently cuts the hydrometer scale. Make this observation by placing the eye slightly below the level of the liquid and slowly raise the eye until the surface of the sample first seen as a distorted ellipse seems to become a straight line cutting the hydrometer scale.

11.4 If the sample is too viscous for a specific gravity by hydrometer, then report "NA" (not applicable). Safety-Kleen method # 9929 should be considered as an alternative procedure for determining specific gravity when hydrometers are impractical.

11.5 To avoid cross contamination, sample aliquots used in the determination of specific gravity are not returned to the original sample containers. In situations where this practice leaves insufficient sample for retention, the subsample may be returned - however, sufficient precautions must be taken to ensure that cross contamination (of PCBs for example) *does not occur. Make sure the cylinder is clean and dry to avoid any contamination. Be certain that the sample is poured back into the same original sample jar when retention of the subsample is required.*

12. CALCULATIONS

12.1 None required.

13. REFERENCES

13.1 **ASTM 1298**, *Standard Test Methods for Density, Relative Density (Specific Gravity), or API Gravity of Crude Petroleum and Liquid Petroleum Products by Hydrometer Method.*

METHOD #: 9903
SAFETY-KLEEN CORP. **REVISION: 03/94**
TECHNICAL CENTER **SUPERSEDES: 08/89**

ATTACHED IS A DOCUMENT FOR: **REVISION** Date: 04-05-94

TITLE: STANDARD OPERATING PROCEDURE FOR THE DETERMINATION OF SPECIFIC GRAVITY OF WASTE MATERIALS USING HYDROMETERS

(KEY WORDS: SPECIFIC GRAVITY, HYDROMETER)
(BASED ON: ASTM D 1298)

SERIES/SUBJECT

9000 Analytical Methods
9900 General Methods

COMMENTS:

INITIATOR -

DEPARTMENT MANAGER(S) -

TECHNICAL INFORMATION SPECIALIST -

ATTACHED IS A DOCUMENT FOR: **REVISION** Date: 04-05-94

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9000 Analytical Methods
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APPROVALS:

DEPARTMENT MANAGER(S)

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VICE PRESIDENT, TECHNICAL

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Login #: __________

SAFETY-KLEEN CORP.
TECHNICAL CENTER

METHOD #: 9401
REVISION: 02/05
SUPERSEDES: 07/99

ATTACHED IS A DOCUMENT FOR: REVISION

Date: 01/27/2005

TITLE: STANDARD OPERATING PROCEDURE FOR SCREENING WASTE MATERIALS FOR IGNITABILITY USING SETAFLASH CLOSED CUP TESTERS

(KEY WORDS: IGNITABILITY, D001, SETAFLASH)
(BASED ON: ASTM D 3278 AND USEPA 1020A)

SERIES/SUBJECT

9000 Analytical Methods
9400 General Methods - Organic

APPROVALS:
DEPARTMENT MANAGER(S)

Mike Conzy 1/28/05

1/31/05

DIRECTOR WASTE APPROVAL AND ANALYTICAL SERVICES

1/31/05

Login #: 282

SAFETY-KLEEN CORP.
TECHNICAL CENTER

METHOD #: 9401
REVISION: 02/05
SUPERSEDES: 07/99

ATTACHED IS A DOCUMENT FOR: **REVISION** Date: 01/27/05

TITLE: STANDARD OPERATING PROCEDURE FOR SCREENING WASTE MATERIALS FOR IGNITABILITY USING SETAFLASH CLOSED CUP TESTERS

(KEY WORDS: IGNITABILITY, D001, SETAFLASH)
(BASED ON: ASTM D 3278 AND USEPA 1020 A)

SERIES/SUBJECT

9000	Analytical Methods
9400	General Methods - Organic

COMMENTS:

INITIATOR - This revision adds a table of typical CCS material and their flashpoints as suggested by the State of New Jersey. Labs may use CCS material from the list or material of their own choosing appropriate for the flashpoint they are determining.

The revision also updates vendors and catalog numbers of equipment and supplies.
Mike Conry 01/27/2005

DEPARTMENT MANAGER(S) -

TECHNICAL INFORMATION SPECIALIST -

TITLE: STANDARD OPERATING PROCEDURE FOR SCREENING WASTE MATERIALS FOR IGNITABILITY USING SETAFLASH CLOSED CUP TESTERS

(KEY WORDS: IGNITABILITY, D001, SETAFLASH)
(BASED ON: ASTM D 3278 and EPA 1020 A)

1. SCOPE AND APPLICATION

1.1 The Setaflash Closed Cup Tester can be used to screen waste materials for the hazardous waste characteristic of ignitability D001 (given at 40 CFR 261.21). Although actual flashpoints can be determined by Setaflash, this is primarily a screening procedure used to determine whether a sample will, or will not flash at a specified temperature under ambient atmospheric pressure conditions.

1.2 Due to the long temperature equilibration times needed with the Setaflash, actual flash points should be determined using the Tag Closed Cup tester (SK 9402) or Pensky-Martens (SK 9407) if possible. The Setaflash tester can be used to determine actual flash points if an actual flashpoint tester is not available (please see SK 9403 for determining actual flashpoints by Setaflash).

1.3 The Setaflash test may be performed on all samples including solids, semi-solids and highly viscous samples; however, it should not be used on recoverable samples with a specific gravity of 1.2 or over because such samples are likely to have a high concentration of halogenated solvents which will cause ambiguous results due to the rapid evolution of non-ignitable vapors.

2. SAFETY AND WASTE HANDLING

2.1 **Fire - Caution** - Before cleaning make sure there are no open flames in the area.

Fire - Do not open or store sample containers in the vicinity of an open flame.

Fire - When the test flame is not lit be certain the gas is off and that the flame has not simply gone out.

Fire - If any spill occurs, wipe up with an absorbent wipe. Used wipes and plastic pipettes must be placed in a metal container lined with a plastic trash bag. The metal top must be kept on the container at all times except to add or to remove the contents. In the event of a fire, the top should quickly smother it. Any fires involving these materials must be treated as Class A fires. The contents must be removed daily and may be disposed of in the regular trash.

Burns - At high temperature, care must be taken to keep the hands away from the cup area, except for the operating handle of the tester.

2.2 **Eye Contact** - Regular safety glasses with side shields are to be worn to provide protection from accidental sample spillage, sample splash, and sample splatter during flashing. Any eye contact must be removed by thorough washing and follow-up action.

2.3 **Hand Contact** - The use of disposable nitrile gloves provides adequate protection from contact with the samples and liquids used for cleaning. All skin contact must be washed off immediately.

2.4 **Respiratory** - Exposure to the vapors from the sample and liquids used for cleaning should be kept to a minimum by working in a well-ventilated area. The sample container must be opened in a hood and only long enough to obtain a sample. A fitted respirator must be available for use in case of sample spills.

2.5 **Waste Disposal** - After each run, transfer the spent sample to a waste solvent container for disposal or recycling.

Waste Disposal - The remainder of the sample in the original jar must be returned to sample storage for future testing or later disposal.

3. SUMMARY OF METHOD

3.1 This is a flash/no flash screening test suitable for liquids, solids, highly viscous liquids, and semi-solids. The sample is introduced into the cup of the apparatus by opening the cover and adding the sample. The tester is set and maintained at fixed threshold temperatures. After one (1) minute, a test flame of a definite size is applied and an observation made as to whether or not an unambiguous flash occurs.

3.2 The instrument is to be set *2 F° above* the target temperature to bias the results in a conservative direction and to assure that any effect from pressure differences is accounted for without having to determine the pressure correction. The reported results *are not* to include the 2 F° temperature adjustment.

4. SAMPLE HANDLING AND PRESERVATION

4.1 The samples are considered to be concentrated wastes. The sample container may be a wide mouth glass bottle with a Teflon lined cap. No sample preservation is required, however, samples should be stored at a temperature between 40 F and 90 F to prevent physical damage to the container due to freezing or pressure build up. Short term elevated/reduced temperatures experienced during sample shipment will not significantly affect sample integrity.

4.2 Erroneous results may be obtained if precautions are not taken to avoid the loss of volatile material. Do not open containers unnecessarily. Results for samples from leaky containers must be marked to indicate that the sample integrity was not maintained during shipping/storage.

4.3 For shipment of samples, use a wide mouth glass bottle (preferably plastic-coated) with a Teflon lined cap. For samples to be used on location, any clean glass bottle is satisfactory, but some secondary containment must be provided when transporting the sample. The bottle should be filled at least 75 % full but not more than 90 % full.

4.4 A 2 mL (or 2 g) specimen is required for each screening analysis. An actual flash point determination by Setaflash may require as many as 10 analyses. Do not repeat the test on the same sample. If a replicate is needed, use a new specimen.

5. INTERFERENCES

5.1 Occasionally, at a temperature near the flash point, the application of the test flame will cause a halo or an enlarged flame. This is not a flash and should be ignored.

5.2 Abnormally low or high ambient pressures may cause an error by as much as 3 F°. When carrying out equipment qualifications and when establishing the flash point for a sample that is very close to a regulatory limit, correct the result for barometric pressure and report the resulted as "corrected".

5.3 The combustion of halogenated solvents in the flame may cause the flame to change shape, color, or to be extinguished.

6. APPARATUS

NOTE: Unless indicated as mandatory, all references to manufacturer and catalog number are provided as examples of acceptable items.

6.1 Setaflash Tester - ERDCO Engineering Corporation
Evanston, IL. 60204 Phone: (847)-328-0550
Model 01SF, s/n 1995 (Old Analog Model) or
Model RT-01 (Digital Model)

6.2 Disposable Pipettes - Falcon plastic transfer pipets. One piece polyethylene, 3 mL capacity with a reference line at 2 mL. (VWR Cat. No. 52947-948)

6.3 Tubing - Silicone Rubber 1/16" I.D., 1/8" O. D., 1/32" Wall. 12" needed for each changeover. Soft flexible tubing is needed to assure that the flame is easily controlled by the pinch clamp. (VWR Cat. No. 62998-173), and,

Amber Latex 3/16" I.D., 3/8" O. D., 3/32" Wall. 36-48" needed for each changeover. Flexible tubing is needed so that the SETAFLASH can be easily placed on the work area. (VWR Cat No. 62996-440)

6.4 Igniter – Any commerically available butane lighter

6.5 Face Shield - (VWR Cat. No. 33007-060) (optional)

6.6 Disposable Paper Wipes - Kimwipes 4.5"x8.5" (VWR Cat. No. 21905-020)

6.7 Disposable Gloves - N-Dex® 8 mil Nitrile Gloves, Mandatory.
(Fisher Cat. # 11-388-88).

6.8 Barometer - OPTIONAL - Aneroid, Hanging Type

6.9 Pasteur Disposable Pipettes, 2 mL (Fisher Cat. No. 13-678-20)

7. REAGENTS

Reagents must have the following clearly identified:	
Container: and/or	**Logbook:**
Description	Description
Source	Source
Lot #	Lot #
Purity	Purity
Date of Receipt	Date of Receipt
Date Opened	
NOTE: If purity is not known, record the grade.	

Standards and all solutions must have the following clearly identified:	
Container:	**Logbook:**
Description	Standard/Solution Name
Nominal Concentration	Sources
Date Prepared	Lot #s
Expiration Date	Purities
	Concentrations
	Preparer's Name
	Date of Preparation
	Expiration Date
NOTE: If purity is not known, record the grade.	

7.1 **Natural Gas** for flame (Methane CAS No.74-82-8)

7.2 **Calibration Check Standard (CCS)** - Calibration Check Standards are typically technical or reagent grade materials, with flashpoints close to the target flashpoint, or a mixture of reagent grade materials that have been experimentally determined to have a flash point close to the target flash point. The tolerance for the flash points is established for each temperature range separately. Laboratories may use the CCS material listed below or others that have been shown to flash close to the target flash point.

Typical Calibration Check Standards are shown below:

CCS	Flashpoint (°F)
n-Propanol	59
p-Xylene	77
n-Butanol	95
Myrcene	102
Decane	126
n-Hexanol	140
5% n-Butanol/95% 2-Butoxyethanol	140
2-Butoxyethanol	142
Actrel 4493L	199

8. PREVENTIVE MAINTENANCE

8.1 Clean spillage and routine handling contamination from the surfaces of the instrument and work areas. methanol or acetone are usually adequate solvents.

> NOTE: **Be sure there are no open flames in the area while cleaning. Both methanol and acetone are highly flammable.**

8.2 Complete the system cleaning as required. This is largely to remove carbon residues and contamination in areas that are not effectively cleaned during the daily cleaning. Replace all tubing as required.

8.3 Verify the accuracy of the thermometer annually (see SK Method 6201).

8.4 All maintenance must be recorded in the maintenance logbook.

9. TROUBLE SHOOTING AND CORRECTIVE ACTION

9.1 If a flash point obtained on a control sample or if the average or range of two control sample determinations does not fall within acceptable control limits, be sure the cup lid assembly makes a vapor-tight seal with the cup, the shutter provides a light-tight seal, and that adequate heat transfer paste surrounds the thermometer bulb and the immersed portion of the barrel.

9.2 When in doubt about a response, get a second opinion.

10. QUALITY CONTROL

10.1 **Calibration -** Initially and annually, verify the accuracy of the thermometer and the timer. Record this information on the equipment log indicating who did the verification and the date it was performed. Follow SK Method 6201 for this procedure.

10.2 **Calibration Check Standard (CCS) -** Each analytical system used will be checked daily with a standard at the threshold level for the sample being evaluated. A sample that is representative of the waste stream or product line being evaluated, will be analyzed. The sample may be a formulated sample or a composite of representative samples. If the sample is a composite, the analyte levels may be adjusted to give a flash at the target temperature.

11. PROCEDURE

11.1 **Preparation Of Apparatus -** The tester is easily moved and can be stored when not in use. Place the tester on a level, stable surface. Tests are to be made in a draft-free area so that the minimum temperature at which a sample will flash is detected.

11.2 **Initial Calibration And Standardization**:

Analog Testers: Before initial use, determine the relationship between the temperature control dial and the thermometer readings. If desired, a plot may be generated as a graphic aid in using this relationship. At each major (numbered) dial division proceed as follows:

Turn the temperature control knob (see Note below) fully counterclockwise ("0" reading). Advance the temperature control knob clockwise until the indicator light is illuminated. Advance the knob clockwise to the next numbered line. After the thermometer's mercury column ceases to advance, record the dial reading and the temperature. Advance the knob clockwise to the next numbered line. After the thermometer's mercury column ceases to advance, record the dial reading and the temperature. Repeat this procedure through the full range of the instrument. Record the dial readings versus the respective temperatures. If desired, a plot may be made to facilitate obtaining approximate dial settings for desired temperatures. Record the results in the equipment log along with the date and analyst's name.

NOTE: Set the fine control (center, small knob) at its mid-position and allow it to remain there throughout the calibration. The calibration is determined by adjusting the coarse control (large, outer knob) only.

Digital Testers: Select desired temperature. Verify selected temperature with a thermometer

11.3 Start-Up For Each Shift - For the first sample at each temperature, record temperatures and any distinctive flame characteristics as described later in this section.

11.4 Flash/No Flash Screening Test - Inspect the inside of the sample cup, lid, and shutter mechanism for cleanliness. If necessary, use an absorbent paper tissue to wipe clean.

Switch the instrument on and turn the coarse temperature control knob fully clockwise (on full) causing the indicator light to illuminate (see Note below). When the thermometer indicates a temperature about 5 F° below the target (or specification) temperature, reduce the heat input to the sample cup by turning the coarse temperature control knob counterclockwise to the desired control point.

NOTE: Set the instrument 2 F° *above* the target temperature to bias the results in a conservative direction and account for any effects caused by non-standard atmospheric pressures without having to determine or correct them.

When the indicator light slowly cycles on and off read the temperature on the thermometer. If necessary, adjust the fine (center) temperature control knob to obtain the desired test (target) temperature. When the test temperature is reached and the indicator lamp occasionally cycles on and off, prepare to introduce the sample.

NOTE: The target temperature may be attained by originally turning the coarse temperature control knob to the proper setting for the temperature desired rather than to the maximum setting (on full). The elapsed time to reach the temperature will be greater, except for maximum temperature; however, less attention will be required during the intervening period.

WARNING: Be sure that there are no open flames when opening the sample bottle.

Open the cover and, using a disposable plastic pipette, transfer approximately 2 mL of sample to the cup of the tester. If the sample is highly viscous, solid or semi-solid transfer approximately 2 grams of sample with the spatula to the cup and quickly spread it evenly over the surface of the cup.

Set the timer by rotating its knob clockwise to its stop position. Open the gas control valve and light the flame. Adjust the test flame with the pinch valve to conform to the size of the 4mm (5/32 in.) gauge marked on the top of the cup.

After the time signal goes off, apply the test flame by slowly and uniformly opening the shutter and closing it completely over a period of approximately 2-1/2 seconds. Watch carefully for a flash at the cup opening.

The sample is deemed to have flashed when a flame appears and spreads over the surface of the sample. Record the test result as "FLASH" or "NO FLASH".

Occasionally, particularly near the actual flash point, the application of the test flame will cause a "halo" or enlarged flame. In order to verify that the sample has flashed; while directing the flame into the cup, immediately turn off the gas to the test flame. If the flame remains, then the sample has FLASHED. If the flame is extinguished, the sample had NO FLASH.

Record the test result as "FLASH" or "NO FLASH" along with the temperature reading (*Not* to include the 2 F° oversetting).

NOTE: Never apply the test flame to the sample in the cup more than once. Fresh portions of the sample must be used for each test.

Turn off the pilot and test flames using the gas control valve. Remove the sample with a pipette and empty the spent sample into a one pint glass jar. Wipe the inside of the cup to remove any remaining sample. If necessary, use a small amount of acetone to clean the cup and then wipe the inside of the cup with absorbent paper tissues. The wipes will emit a large amount of vapor and must be disposed of in a closed waste container for fire control.

12. CALCULATIONS

NOTE: Unless noted as corrected on the report, all flash points reported by Safety-Kleen are uncorrected and do not include the 2 F° overset.

12.2 Laboratories below 1000 ft in elevation are not required to correct flashpoint results to standard. However, all reported results do not include the 2 F° overset (e.g. determinations made at 142°F are reported as if made at 140°F).

12.2 All laboratories at an elevation of 1000 feet or greater are required to correct the flashpoint result to sea level (760 torr) as follows:

Corrected flash point = F + 0.06 (760 - B)

Where:
F = Observed Flash Point (°F).
B = Ambient Barometric Pressure (Torr).

A daily barometric pressure is to be documented.

13. REFERENCES

13.1 **ASTM D 3278**, *Standard Test Methods for Flash Point of Liquids by Small Scale Closed-Cup Apparatus*, American Society for Testing and Materials, Volume 06.01.

13.2 **ASTM D 3828**, *Standard Test Methods For Flash Point By Small Scale Closed Tester,* American Society for Testing and Materials, Volume 05.02.

13.3 **USEPA, OSWER**, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods**,** SW-846. Third Edition (November 1986), Final Update III: **Method 1020 A**, Rev. 1, (07/92), *Setaflash Closed-Cup Method For Determining Ignitability*.

SAFETY-KLEEN CORP.
TECHNICAL CENTER

METHOD #: 9906
REVISION: 02/05
SUPERSEDES: 03/00

ATTACHED IS A DOCUMENT FOR: **REVISION**

Date: 01/28/2005

TITLE: STANDARD OPERATING PROCEDURE FOR THE DETERMINATION OF pH AND WATER COMPATIBILITY OF WASTE MATERIALS

(KEY WORDS: CORROSIVITY, COMPATIBILITY, PAPER, METER)
(BASED ON: USEPA 9040 B, 9041 A, 9045 C, ASTM D-5058)

SERIES/SUBJECT

9000 Analytical Methods
9900 General Methods

APPROVALS:
DEPARTMENT MANAGER(S)

Mike Conry 1/28/05

1/31/05

DIRECTOR OF WASTE APPROVAL AND ANALYTICAL SERVICES

1/31/05

Login #: 283

ATTACHED IS A DOCUMENT FOR: **REVISION** Date: 01/28/2005

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COMMENTS:

INITIATOR – Mike Conry

Appendix A added. Appendix A is meant to be compliant with SW-846 method 9045C "Soil and Waste pH". The appendix was added so Linden could maintain state certification for pH. The appendix reflects the required calibration criteria of ± 0.05 pH units of the buffer solutions. The non-compliant mainbody of the SOP has a calibration criteria of ± 0.1 pH units of the buffer solutions to handle the wide range of waste materials received by SK.

DEPARTMENT MANAGER(S) -

TITLE: STANDARD OPERATING PROCEDURE FOR THE DETERMINATION OF pH AND WATER COMPATIBILITY OF WASTE MATERIALS

(KEY WORDS: CORROSIVITY, COMPATIBILITY, PAPER, METER)
(BASED ON: USEPA 9040 B, 9041 A, 9045 C, 150.1, ASTM D-5058)

1. SCOPE AND APPLICATION

1.1 The determination of the pH and water compatibility of a waste sample is performed to screen the waste materials for acids/bases present in the material that may have to be neutralized prior to processing and/or co-mingling with other waste streams and the compatibility of the sample with other wastes that may contain significant amounts of water.

1.2 Neutralization may be needed for employee safety and/or because of possible problems resulting from reactivity with other wastes or corrosivity to the equipment. Water incompatibility would indicate that special handling would be required to process the waste material. A pH between 5 and 9 would indicate nominal acid/base content for waste material. A pH less than 5 and more than 9 would indicate an excess of acid or base, respectively.

Definition - (40 CFR 261.22) A solid waste exhibits the characteristic of corrosivity if a representative sample of the waste has either of the following properties:

1. It is aqueous and has a pH less than or equal to 2 or greater than or equal to 12.5,
2. It is a liquid and corrodes steel (SAE 1020) at a rate greater than 6.35 mm (0.250 inch) per year at 55° C.

A solid waste that exhibits the characteristic of corrosivity, but is not listed as a hazardous waste in 40 CFR 261 Subpart D, has the EPA Hazardous Waste Number of D002.

1.3 This method is also used to measure the compatibility of a sample with water and is indicative of the compatibility of the samples with other materials that contain significant levels of water. If the results indicate that the sample may be incompatible, Method SK 9926 must be used to further evaluate the waste (see SK SOPs 3101 and 3104 for further information).

1.4 **Definitions** - Definitions pertinent to this standard are given in Appendix C of the Safety-Kleen Quality Assurance Manual.

2. SAFETY AND WASTE HANDLING

2.1 **Fire - Caution:** Some of the materials are highly flammable. Be sure that there are no open flames nearby during testing or cleaning. The fumes released may be flammable and migrate to open flames.

Fire - If any spill occurs, wipe up with an absorbent wipe. Used wipes and plastic pipettes must be placed in a metal container lined with a plastic trash bag. The metal top must be kept on the container at all times except to add or to remove the contents. In the event of a fire, the top should quickly smother it. Any fires involving these materials must be treated as Class A fires. The contents must be removed daily and must be disposed of properly.

2.2 **Eye Contact** - Regular safety glasses with side shields provide adequate protection from an accidental sample splash.

2.3 **Hand Contact** - Use of disposable nitrile gloves provide adequate protection from contact with the samples. All skin contact must be washed off immediately.

2.4 **Respiratory** - Exposure to the vapors from the sample should be kept to a minimum by working in a well-ventilated area. The sample container must be opened in a hood and only long enough to obtain a sample. A fitted respirator must be available for use in case of sample spills.

2.5 **Waste Disposal** - All aqueous extracts must be disposed of in a waste solvent container.

Waste Disposal - The remainder of the sample in the original container must be returned to sample storage for future testing or later disposal.

3. SUMMARY OF METHOD

3.1 If the sample is aqueous, or contains an aqueous layer, the pH is tested directly on the aqueous phase with the wide range pH paper or a pH meter and the sample is assumed to be compatible with water. Samples without a distinct aqueous layer are extracted with distilled water and the extract is analyzed.

3.2 pH by paper is reported to the nearest whole number.

3.3 The pH of the aqueous layer or aqueous extract is considered to be the pH of the total sample.

3.4 **Paper** - This method is used to measure the pH of samples. This is a fingerprint or screening analysis.

3.5 **Meter** - pH determinations obtained by the meter to the nearest 0.1 pH unit.

4. SAMPLE HANDLING AND PRESERVATION

NOTE: Sample storage, preservation, and holding times are detailed in Tables 1 - 3 of SK 3105 and section 3.4 of the Safety-Kleen Quality Assurance Manual.

4.1 The samples are considered to be concentrated wastes. The sample container may be a wide mouth glass bottle with a lined cap. No sample preservation is required, however, samples should be stored at a temperature between 40°F and 90°F to prevent physical damage to the container due to freezing or pressure build up. Short term elevated/reduced temperatures experienced during sample shipment will not significantly affect sample integrity.

4.2 Results for samples from leaky containers must be marked to indicate that the sample integrity was not maintained during shipping/storage.

4.3 For shipment of samples, use a wide mouth glass bottle (preferably plastic-coated) with a Teflon® lined cap. For samples to be used on location, any clean glass bottle is satisfactory, but some secondary containment must be provided when transporting the sample. The bottle should be filled at least 75 % full but not more than 90 % full.

4.4 A 50 mL sub-sample is recommended for each analysis.

5. INTERFERENCES

5.1 **Paper** - The pH paper is subject to significant solution interferences from color, turbidity, colloidal matter, oxidants, and reductants. The pH of a waste is tested on the aqueous portion or an aqueous extract. If the water discolors the paper, then pH is tested using a pH meter.

5.2 **Meter** - The glass electrode, in general, is not subject to significant solution interferences from color, turbidity, colloidal matter, oxidants, reductants or high salinity.

The pH of a waste is tested on the aqueous portion or an aqueous extract. Care should be taken while transferring or extracting to avoid sludge, oil or emulsion.

Coatings of oily material or particulate matter can impair electrode response. These coatings can usually be removed by gently wiping or detergent washing, followed by rinsing with distilled water. If an electrode gets coated with oily material that will not rinse free, the electrode can either be cleaned in an ultrasonic bath or washed with detergent, rinsed several times with water, placed in 1:10 HCl solution so that the lower third of the electrode is submerged and then thoroughly rinsed with water.

Temperature correction is not required for the normal temperature ranges encountered unless the pH is > 12.0 and then the sample temperature is required not to exceed 26° C for analysis.

6. APPARATUS

NOTE: Unless indicated as mandatory, all references to manufacturer and catalog number are provided as examples of acceptable items.

6.1 **pH Paper** - Wide Range - with distinct color change for every 1 pH unit. Hydrion Insta-Check, with dispenser, pH range 0-13 (Fisher Cat. # 14-850-1)

6.2 **pH Meter** - Standard Laboratory Quality; pH range of 0-14 with 0.01 pH resolution; 0 to ± 1999 mV with 1.0 mV resolution.

6.3 **Electrode** - Combination - compatible with meter connections and organic solvents. Temperature range of 0º to 100º C, BNC connector. (Fisher # 13-641-308, Corning # 476830)

6.4 **Pipet** - Disposable plastic (VWR Cat. # 14670-13)

6.5 **Pipets, Pasteur**, Disposable (Fisher Cat. # 13-678-7C)

6.6 **Paper Wipes** - Kimwipes 4.5" x 8.5" (VWR Cat. # 21905-020)

6.7 **Beakers** - Disposable

20 mL (Polystyrene) (Fisher Cat. # 02-544-37)

50 mL (Polystyrene) (Fisher Cat. # 02-544-38)

6.8 **Beaker** - 150 mL (glass) (Fisher Cat. # 02-539J)

6.9 **Thermometer** - Precision grade, Temperature range: 0° to 30°C with 0.1 C° gradations. (Fisher Cat # 14-983-17M).

6.10 **Disposable Gloves**: N-Dex® 8 mil Nitrile Gloves, Mandatory. (Fisher Cat. # 11-388-88).

7. REAGENTS

Reagents must have the following clearly identified:	
Container: and/or	**Logbook:**
Description	**Description**
Source	**Source**
Lot #	**Lot #**
Purity	**Purity**
Date of Receipt	**Date of Receipt**
Date Opened	
NOTE: If purity is not known, record the grade.	

Standards and all solutions must have the following clearly identified:	
Container:	**Logbook:**
Description	**Standard/Solution Name**
Nominal Concentration	**Sources**
Date Prepared	**Lot #s**
Expiration Date	**Purities**
	Concentrations
	Preparer's Name
	Date of Preparation
	Expiration Date
NOTE: If purity is not known, record the grade.	

7.1 **Water** - Distilled and/or deionized.

7.2 **Calibration And Check Standards** - Certified buffers at pH 4, 7, and 10. (Fisher Cat. No. SB101-500, SB107-500 and SB115-500.) For potentially corrosive sample verification (i.e. less than 2.0 or greater than 12.5)- pH 2 and pH 12.0 (Fisher Cat. No. SB96-500 for pH 2.0 and Fisher Special Order Micro Essential Lab Cat # 270-1200)

NOTE: If the instrument manufacturer's calibration protocol requires the use of standards other than the standard buffers 4, 7, and 10 the calibration must be checked using these buffers.

8. PREVENTIVE MAINTENANCE

8.1 **Paper -** Keep the pH paper dispenser at room temperature, protected from moisture, heat, acid/base fumes and other chemicals. Discard any rolls that appear to be contaminated or defective.

8.2 **Meter -** The electrode(s) must be cleaned or rinsed thoroughly with distilled/deionized water between sample analysis. Inspect the electrode(s) for fouling. Clean the electrode(s) with methanol and/or acetone and rinse with distilled/deionized water before storing them to assure that residue does not build up on the contact surface. Never leave the electrode exposed to the open air for more than a few seconds. Keep the electrode(s) sensor tips in distilled water or pH 7 buffer solution.

9. TROUBLESHOOTING AND CORRECTIVE ACTION

9.1 **Paper -** Certain aqueous or extracted material may inhibit or mask changes in the pH paper. If water is dark colored, deeply colored, turbid or contains colloidal matter or the color change does not match with the chart on the dispenser, then measure the pH by meter.

9.2 **Meter -** Coatings of oily material or particulate matter can impair electrode response. This can easily be removed by gentle wiping or detergent washing, followed by rinsing with distilled water. If it does not rinse free, use an ultrasonic bath or place it in 1:10 HCl solution so that the lower third of the electrode is submerged, then thoroughly rinse with distilled water.

10. QUALITY CONTROL

NOTE: Calculations for the determination of the universal quality control parameters (e.g., percent recovery, percent difference, relative percent difference (RPD), and relative standard deviation (RSD)), are given in chapter 2 of the Safety-Kleen Quality Assurance Manual.

NOTE: Corrective actions to be taken when the following quality control parameters are out-of-control are given in chapter 2 of the Safety-Kleen Quality Assurance Manual.

10.1 pH Paper Analysis:

10.1.1 Nothing required.

10.2 pH Meter Analysis:

10.2.1 Initial Calibration - Initially, and whenever a continuing calibration verification has not met acceptance criteria, electrodes and meters must be calibrated by standardizing the meter/electrode system with standard pH buffers at pH 4.0, 7.0, and 10.0, or as per the manufacturer's recommendations and then verifying the calibration with pH buffers at 4.0, 7.0, and 10.0. **Results must agree to within ± 0.1 pH unit of the expected value**. A record must be established and maintained for each meter/system.

10.2.2 Calibration Verification - Each shift, the calibration of the pH meter must be verified by using the standard pH 4.0, 7.0, and 10.0 or 2.0, 7.0, and 12.0 buffers, or at two pH values which bracket the analytical range of the samples. Samples with pH values below 4.0 and above 10.0 require meter verification at pH 2.0 and 12.0 respectively. **Results must agree to within ± 0.1 pH unit or the system must be recalibrated.**

10.2.3 Duplicates - One sample in twenty samples must be analyzed in duplicate. Duplicate results must agree to within 0.2 pH unit. If the duplicate results vary by more than 0.2 pH unit, the determination must be repeated in duplicate (for a total of *four* analyses) on a new sample aliquot. If the second set of duplicate results agree to within 0.2 pH unit of each other, report the average. If they do not agree to within 0.2 pH unit, report the average of all 4 pH determinations along with a notation indicating “variable pH results.”

10.3 Method Performance - The performance of this method is detailed in section 9 of EPA SW-846 methods 9040B, 9041A, and 9045C (please see items 13.1, 13.2, and 13.3 in this method).

11. PROCEDURE

11.1 Determine whether the sample is aqueous or whether it contains an aqueous layer. (Karl Fischer Titration may be used in making this determination.) If the sample is aqueous, or contains an aqueous layer, the pH is tested directly on the aqueous phase with the wide range pH paper or a pH meter and the sample is assumed to be compatible with water. Non-aqueous samples and samples without a distinct aqueous layer are extracted with distilled water and the pH determination is made on the aqueous extract.

11.2 **Paper** - For all determinations by paper, estimate and report the pH to the nearest whole unit.

11.2.1 **Sample As Received** - For aqueous samples or samples with a distinct aqueous layer, take an approximately 2" long strip of pH paper. Moisten one end with one or two drops of distilled water. Mix the sample well. With a disposable pipet, draw a representative sample; and, while suspending the moistened pH paper, add a drop to the moistened area. Wait for 5 to 10 seconds. Correlate the color change of the pH paper with the pH chart provided on the dispenser. If the pH paper is masked by the color of the sample, use the extraction technique.

11.2.2 Extraction Technique - Take equal volumes of distilled water and well-mixed sample in a beaker. Mix gently. Let the two phases separate. If there are any signs of reaction indicating incompatibility, note the observations on the sample report. Examples of indications of incompatibility are: generation of extreme heat or violent reactions, and production of fumes, dusts, gases, or other products when mixed with water. Take an approximately 2" long strip of pH paper. With a disposable pipet, draw a sample of the aqueous phase and, while suspending the pH paper, add a drop to the surface. Wait 5 to 10 seconds. Correlate the color change of the pH paper with the pH chart provided on the dispenser. If the extracted water is still dark or the pH paper shows an abnormal color development, use a pH meter to determine pH.

11.2.3 Direct Solid Technique - Take an approximately 2" long strip of pH paper and wet it with water. Touch the wetted pH paper to the solid samples and hold for 5 seconds. Correlate the color change of the pH paper with the pH chart provided on the dispenser. If the pH paper is coated and the color change can not be determined after wiping the pH paper then the extraction technique is to be used.

11.3 **Meter** - For all determinations by pH meter, report the pH to the nearest 0.1 pH unit.

NOTE: Inspect the electrode(s) for fouling. When not in use, keep the electrode immersed in pH 7 buffer solution or distilled/deionized water. Care must be taken to avoid organic phase while transferring the aqueous layer, the oily/organic layer may coat the sensor of the electrode.

11.3.1 **Calibration -** Calibrate the meter/electrode system with standard pH buffers at pH 2.0, 7.0, and 10.0 or 4.0, 7.0, and 10.0, or as per the manufacturer's recommendations and then verify the calibration with buffers at pH 4.0, 7.0, and 10.0. Samples with pH values below 4.0 and above 10.0 require meter verification at pH 2.0 or 12.0 respectively. Each shift, the calibration of the pH meter must be verified by using standard pH 4.0, 7.0, and 10.0 buffers, or at two pH values which bracket the analytical range of the samples. **Results must agree to within ± 0.1 pH unit or the system must be recalibrated.**

NOTE: All samples with a pH of greater than 12.0 require that the sample temperature be held at less than 26°C for pH determinations *and the sample temperature documented.* This may be achieved by the use of a water bath. The meter verification at pH 12.0 usually requires the preparation of a new buffer to achieve QC acceptance criteria.

11.3.2 **Sample As Received -** For aqueous samples or samples with a distinct aqueous layer, use a disposable pipette to transfer an aliquot of the aqueous layer into a disposable plastic beaker or appropriate vessel. Lower the electrode so that the sensor region is at least 1/4" below the surface. Gently stir the sample and wait for about 10 seconds until pH meter is stabilized. Report the pH displayed by the pH meter to the nearest 0.1 pH unit.

11.3.3 **Extraction Technique -** Take equal volumes (at least 5 mL each) of distilled water and well-mixed sample in a beaker or other appropriate vessel, such as a disposable test tube, and mix gently. If there are any signs of reaction indicating incompatibility, note the observations on the sample report. Examples of indications of incompatibility are: generation of extreme heat or violent reactions, and production of fumes, dusts, gases, or other products when mixed with water. Stir gently for about a minute; avoiding emulsification. Let the aqueous layer separate. Centrifugation may be used to facilitate this separation and has been found to give cleaner aqueous extracts minimizing electrode fouling. Transfer an aliquot of the aqueous layer into a disposable beaker or appropriate vessel and lower the electrode so that the entire sensor region is at least 1/4" below the surface. Gently stir the sample and wait for about 10 seconds until pH meter is stabilized. Report the pH value as measured by the pH meter.

11.4 **Water Compatibility** - Look for any violent reactions; fumes, dusts or gases; and any precipitates or emulsions, and if observed, record the observations. If any such reactions are noted, the waste may be water reactive. Once it has been determined that no violent reaction is occurring, handle the container to note any significant temperature change. If a temperature increase or decrease of greater than 10 C° is suspected, or if there are any other indications of reactivity, the waste must be further evaluated to determine its compatibility behavior (see SK SOP 3101 or 3104). If no significant reactions are observed and no significant temperature change is noted, the waste is considered to be water compatible and can be reported as "compatible."

12. CALCULATIONS

12.1 None required.

13. REFERENCES

13.1 **USEPA, OSWER**. *Test Methods for Evaluating Solid Waste*, Third Edition. SW-846, (November 1986): **Method 9040 B**, pH Electrometric Measurement.

13.2 **USEPA, OSWER**. *Test Methods for Evaluating Solid Waste*, Third Edition. SW-846, (November 1986): **Method 9041 A**, pH Paper Method.

13.3 **USEPA, OSWER**. *Test Methods for Evaluating Solid Waste,* Third Edition. SW-846, (November 1986): **Method 9045 C**, Soil pH.

13.4 **USEPA, Methods For Chemical Analysis of Water and Wastes,** EPA-600/4-79-020. **Method 150.1**, *pH, Electrometric.* March 1983.

13.5 **ASTM Standard D-5058** - "Standard Test Methods For Compatibility Screening Analysis Of Waste"

APPENDIX A

TITLE: STANDARD OPERATING PROCEDURE FOR THE DETERMINATION OF pH OF WASTE MATERIALS

(KEY WORDS: CORROSIVITY, METER)
(BASED ON: USEPA, 9045C)

1. SCOPE AND APPLICATION

1.1 The determination of the pH and water compatibility of a waste sample is performed to screen the waste materials for acids/bases present in the material that may have to be neutralized prior to processing and/or co-mingling with other waste streams and the compatibility of the sample with other wastes that may contain significant amounts of water. This appendix is meant to be compliant with SW-846 method 9045C for those SK laboratories that maintain pH certification.

1.2 Neutralization may be needed for employee safety and/or because of possible problems resulting from reactivity with other wastes or corrosivity to the equipment. Water incompatibility would indicate that special handling would be required to process the waste material. A pH between 5 and 9 would indicate nominal acid/base content for waste material. A pH less than 5 and more than 9 would indicate an excess of acid or base, respectively.

Definition - (40 CFR 261.22) A solid waste exhibits the characteristic of corrosivity if a representative sample of the waste has either of the following properties:

1. It is aqueous and has a pH less than or equal to 2 or greater than or equal to 12.5,
2. It is a liquid and corrodes steel (SAE 1020) at a rate greater than 6.35 mm (0.250 inch) per year at 55° C.

A solid waste that exhibits the characteristic of corrosivity, but is not listed as a hazardous waste in 40 CFR 261 Subpart D, has the EPA Hazardous Waste Number of D002.

1.3 This method is also used to measure the compatibility of a sample with water and is indicative of the compatibility of the samples with other materials that contain significant levels of water. If the results indicate that the sample may be incompatible, Method SK 9926 must be used to further evaluate the waste (see SK SOPs 3101 and 3104 for further information).

2. SAFETY AND WASTE HANDLING

2.1 **Fire - Caution:** Some of the materials are highly flammable. Be sure that there are no open flames nearby during testing or cleaning. The fumes released may be flammable and migrate to open flames.

Fire - If any spill occurs, wipe up with an absorbent wipe. Used wipes and plastic pipettes must be placed in a metal container lined with a plastic trash bag. The metal top must be kept on the container at all times except to add or to remove the contents. In the event of a fire, the top should quickly smother it. Any fires involving these materials must be treated as Class A fires. The contents must be removed daily and must be disposed of properly.

2.2 **Eye Contact** - Regular safety glasses with side shields provide adequate protection from an accidental sample splash.

2.3 **Hand Contact** - Use of disposable nitrile gloves provide adequate protection from contact with the samples. All skin contact must be washed off immediately.

2.4 **Respiratory** - Exposure to the vapors from the sample should be kept to a minimum by working in a well-ventilated area. The sample container must be opened in a hood and only long enough to obtain a sample. A fitted respirator must be available for use in case of sample spills.

2.5 **Waste Disposal** - All aqueous extracts must be disposed of in a waste solvent container.

Waste Disposal - The remainder of the sample in the original container must be returned to sample storage for future testing or later disposal.

3. SUMMARY OF METHOD

3.1 If the sample is aqueous, or contains an aqueous layer, the pH is tested directly on the aqueous phase with a pH meter and the sample is assumed to be compatible with water. Samples without a distinct aqueous layer are extracted with distilled water and the extract is analyzed.

3.2 The pH of the aqueous layer or aqueous extract is considered to be the pH of the total sample.

3.3 **Meter** - pH determinations obtained by the meter to the nearest 0.05 pH unit.

4. SAMPLE HANDLING AND PRESERVATION

NOTE: Sample storage, preservation, and holding times are detailed in Tables 1 - 3 of SK 3105 and section 3.4 of the Safety-Kleen Quality Assurance Manual.

4.1 The samples are considered to be concentrated wastes. The sample container may be a wide mouth glass bottle with a lined cap. No sample preservation is required, however, samples should be stored at a temperature between 40°F and 90°F to prevent physical damage to the container due to freezing or pressure build up. Short term elevated/reduced temperatures experienced during sample shipment will not significantly affect sample integrity.

4.2 Results for samples from leaky containers must be marked to indicate that the sample integrity was not maintained during shipping/storage.

4.3 For shipment of samples, use a wide mouth glass bottle (preferably plastic-coated) with a Teflon® lined cap. For samples to be used on location, any clean glass bottle is satisfactory, but some secondary containment must be provided when transporting the sample. The bottle should be filled at least 75 % full but not more than 90 % full.

4.4 A 50 mL sub-sample is recommended for each analysis.

5. INTERFERENCES

5.1 **Meter** - The glass electrode, in general, is not subject to significant solution interferences from color, turbidity, colloidal matter, oxidants, reductants or high salinity.

The pH of a waste is tested on the aqueous portion or an aqueous extract. Care should be taken while transferring or extracting to avoid sludge, oil or emulsion.

Coatings of oily material or particulate matter can impair electrode response. These coatings can usually be removed by gently wiping or detergent washing, followed by rinsing with distilled water. If an electrode gets coated with oily material that will not rinse free, the electrode can either be cleaned in an ultrasonic bath or washed with detergent, rinsed several times with water, placed in 1:10 HCl solution so that the lower third of the electrode is submerged and then thoroughly rinsed with water.

Temperature correction is not required for the normal temperature ranges encountered unless the pH is > 12.0 and then the sample temperature is required not to exceed 26° C for analysis.

6. APPARATUS

NOTE: Unless indicated as mandatory, all references to manufacturer and catalog number are provided as examples of acceptable items.

6.1 **pH Meter** - Standard Laboratory Quality; pH range of 0-14 with 0.01 pH resolution; 0 to ± 1999 mV with 1.0 mV resolution.

6.2 **Electrode** - Combination - compatible with meter connections and organic solvents. Temperature range of 0º to 100º C, BNC connector. (Fisher # 13-641-308, Corning # 476830)

6.3 **Pipet** - Disposable plastic (VWR Cat. # 14670-103)

6.4 **Pipets, Pasteur**, Disposable (Fisher Cat. # 13-678-7C)

6.5 **Paper Wipes** - Kimwipes 4.5" x 8.5" (VWR Cat. # 21905-020)

6.6 **Beakers** - Disposable
20 mL (Polystyrene) (Fisher Cat. # 02-544-37)
50 mL (Polystyrene) (Fisher Cat. # 02-544-38)

6.7 **Beaker** - 150 mL (glass) (Fisher Cat. # 02-539J)

6.8 **Thermometer** - Precision grade, Temperature range: 0° to 30°C with 0.1 C° gradations. (Fisher Cat # 14-983-17M).

6.9 **Disposable Gloves**: N-Dex® 8 mil Nitrile Gloves, Mandatory. (Fisher Cat. # 11-388-88).

7. REAGENTS

Reagents must have the following clearly identified:	
Container: and/or	**Logbook:**
Description	**Description**
Source	**Source**
Lot #	**Lot #**
Purity	**Purity**
Date of Receipt	**Date of Receipt**
Date Opened	
NOTE: If purity is not known, record the grade.	

Standards and all solutions must have the following clearly identified:	
Container:	**Logbook:**
Description	**Standard/Solution Name**
Nominal Concentration	**Sources**
Date Prepared	**Lot #s**
Expiration Date	**Purities**
	Concentrations
	Preparer's Name
	Date of Preparation
	Expiration Date
NOTE: If purity is not known, record the grade.	

7.1 **Water** - Distilled and/or deionized.

7.2 **Calibration And Check Standards** - Certified buffers at pH 4, 7, and 10. (Fisher Cat. No. SB101-500, SB107-500 and SB115-500.) For potentially corrosive sample verification (i.e. less than 2.0 or greater than 12.5)- pH 2 and pH 12.0 (Fisher Cat. No. SB96-500 for pH 2.0 and Fisher Special Order Micro Essential Lab Cat # 270-1200)

NOTE: If the instrument manufacturer's calibration protocol requires the use of standards other than the standard buffers 4, 7, and 10 the calibration must be checked using these buffers.

8. PREVENTIVE MAINTENANCE

8.1 **Meter -** The electrode(s) must be cleaned or rinsed thoroughly with distilled/deionized water between sample analysis. Inspect the electrode(s) for fouling. Clean the electrode(s) with methanol and/or acetone and rinse with distilled/deionized water before storing them to assure that residue does not build up on the contact surface. Never leave the electrode exposed to the open air for more than a few seconds. Keep the electrode(s) sensor tips in distilled water or pH 7 buffer solution.

9. TROUBLESHOOTING AND CORRECTIVE ACTION

9.1 **Meter -** Coatings of oily material or particulate matter can impair electrode response. This can easily be removed by gentle wiping or detergent washing, followed by rinsing with distilled water. If it does not rinse free, use an ultrasonic bath or place it in 1:10 HCl solution so that the lower third of the electrode is submerged, then thoroughly rinse with distilled water.

10. QUALITY CONTROL

NOTE: Calculations for the determination of the universal quality control parameters (e.g., percent recovery, percent difference, relative percent difference (RPD), and relative standard deviation (RSD)), are given in chapter 2 of the Safety-Kleen Quality Assurance Manual.

NOTE: Corrective actions to be taken when the following quality control parameters are out-of-control are given in chapter 2 of the Safety-Kleen Quality Assurance Manual.

10.1 pH Meter Analysis:

10.1.1 **Initial Calibration -** Initially, and whenever a continuing calibration verification has not met acceptance criteria, electrodes and meters must be calibrated by standardizing the meter/electrode system with standard pH buffers at pH 4.0, 7.0, and 10.0, or as per the manufacturer's recommendations and then verifying the calibration with pH buffers at 4.0, 7.0, and 10.0. **Results must agree to within ± 0.05 pH unit of the expected value**. A record must be established and maintained for each meter/system.

10.1.2 Calibration Verification - Each shift, the calibration of the pH meter must be verified by using the standard pH 4.0, 7.0, and 10.0 or 2.0, 7.0, and 12.0 buffers, or at two pH values which bracket the analytical range of the samples. Samples with pH values below 4.0 and above 10.0 require meter verification at pH 2.0 and 12.0 respectively. **Results must agree to within ± 0.05 pH unit or the system must be recalibrated.**

10.1.3 Duplicates - One sample in twenty samples must be analyzed in duplicate. Duplicate results must agree to within 0.2 pH unit. If the duplicate results vary by more than 0.2 pH unit, the determination must be repeated in duplicate (for a total of *four* analyses) on a new sample aliquot. If the second set of duplicate results agree to within 0.2 pH unit of each other, report the average. If they do not agree to within 0.2 pH unit, report the average of all 4 pH determinations along with a notation indicating "variable pH results."

10.2 Method Performance - The performance of this method is detailed in section 9 of EPA SW-846 method 9045C (please see items 13.1, 13.2, and 13.3 in this method).

11. PROCEDURE

11.1 Determine whether the sample is aqueous or whether it contains an aqueous layer. (Karl Fischer Titration may be used in making this determination.) If the sample is aqueous, or contains an aqueous layer, the pH is tested directly on the aqueous phase with a pH meter and the sample is assumed to be compatible with water. Non-aqueous samples and samples without a distinct aqueous layer are extracted with distilled water and the pH determination is made on the aqueous extract.

11.2 Meter - For all determinations by pH meter, report the pH to the nearest 0.05 pH unit.

NOTE: Inspect the electrode(s) for fouling. When not in use, keep the electrode immersed in pH 7 buffer solution or distilled/deionized water. Care must be taken to avoid organic phase while transferring the aqueous layer, the oily/organic layer may coat the sensor of the electrode.

11.2.1 Calibration - Calibrate the meter/electrode system with standard pH buffers at pH 2.0, 7.0, and 10.0 or 4.0, 7.0, and 10.0, or as per the manufacturer's recommendations and then verify the calibration with buffers at pH 4.0, 7.0, and 10.0. Samples with pH values below 4.0 and above 10.0 require meter verification at pH 2.0 or 12.0 respectively. Each shift, the calibration of the pH meter must be verified by using standard pH 4.0, 7.0, and 10.0 buffers, or at two pH values which bracket the analytical range of the samples. **Results must agree to within ± 0.05 pH unit or the system must be recalibrated.**

> **NOTE: All samples with a pH of greater than 12.0 require that the sample temperature be held at less than 26°C for pH determinations *and the sample temperature documented.* This may be achieved by the use of a water bath. The meter verification at pH 12.0 usually requires the preparation of a new buffer to achieve QC acceptance criteria.**

11.2.2 Sample As Received - For aqueous samples or samples with a distinct aqueous layer, use a disposable pipette to transfer an aliquot of the aqueous layer into a disposable plastic beaker or appropriate vessel. Lower the electrode so that the sensor region is at least 1/4" below the surface. Gently stir the sample and wait for about 10 seconds until pH meter is stabilized. Report the pH displayed by the pH meter to the nearest 0.05 pH unit.

11.2.3 Extraction Technique - Take equal volumes (at least 5 mL each) of distilled water and well-mixed sample in a beaker or other appropriate vessel, such as a disposable test tube, and mix gently. If there are any signs of reaction indicating incompatibility, note the observations on the sample report. Examples of indications of incompatibility are: generation of extreme heat or violent reactions, and production of fumes, dusts, gases, or other products when mixed with water. Stir gently for about a minute; avoiding emulsification. Let the aqueous layer separate. Centrifugation may be used to facilitate this separation and has been found to give cleaner aqueous extracts minimizing electrode fouling. Transfer an aliquot of the aqueous layer into a disposable beaker or appropriate vessel and lower the electrode so that the entire sensor region is at least 1/4" below the surface. Gently stir the sample and wait for about 10 seconds until pH meter is stabilized. Report the pH value as measured by the pH meter as "waste pH measured in water at ___°C where "___°C' is the temperature at which the test was conducted.

11.3 Water Compatibility - Look for any violent reactions; fumes, dusts or gases; and any precipitates or emulsions, and if observed, record the observations. If any such reactions are noted, the waste may be water reactive. Once it has been determined that no violent reaction is occurring, handle the container to note any significant temperature change. If a temperature increase or decrease of greater than 10 C° is suspected, or if there are any other indications of reactivity, the waste must be further evaluated to determine its compatibility behavior (see SK SOP 3101 or 3104). If no significant reactions are observed and no significant temperature change is noted, the waste is considered to be water compatible and can be reported as "compatible."

12. CALCULATIONS

12.1 None required.

13. REFERENCES

13.1 **USEPA, OSWER**. *Test Methods for Evaluating Solid Waste,* Third Edition. SW-846, (November 1986): **Method 9040 B**, pH Electrometric Measurement.

13.2 **USEPA, OSWER**. *Test Methods for Evaluating Solid Waste,* Third Edition. SW-846, (November 1986): **Method 9045 C**, Soil pH.

13.3 **USEPA, Methods For Chemical Analysis of Water and Wastes,** EPA-600/4-79-020. **Method 150.1**, *pH, Electrometric.* March 1983.

13.4 **ASTM Standard D-5058 -** "Standard Test Methods For Compatibility Screening Analysis Of Waste"

Appendix I-C

Annual Re-Characterization Analyses on Parts Washer Solvents

State	CLIENT ID	PARAMETER	BRANCH ID	LAB SAMPLE ID	RESULT	Ranked Data	UNITS	QUALIFIER	REPORTING LIMIT	Uth	YEAR	Count	City	DILUTION FACTOR	MDL
ID	PWS 150	1,1-Dichloroethylene	118308	C9D240220001	0.2	0.1	mg/L	U	0.2		2009		Boise	4	0.043
NC	PWS 150	1,1-Dichloroethylene	303101	C8I230211001	0.25	0.125	mg/L	U	0.25		2008		Charlotte	1	0.048
OK	PWS 150	1,1-Dichloroethylene	612401	C8I190324001	0.25	0.125	mg/L	U	0.25		2008		Oklahoma City	1	0.048
NC	PWS 150	1,1-Dichloroethylene	306401	C9D160222001	0.25	0.125	mg/L	U	0.25		2009		Archdale	1	0.011
NY	PWS 150	1,1-Dichloroethylene	202802	C9C310110001	0.25	0.125	mg/L	U	0.25		2009		Avon	1	0.048
NY	PWS 150	1,1-Dichloroethylene	202802	C9D020223001	0.25	0.125	mg/L	U	0.25		2009		Avon	1	0.048
VT	PWS 150	1,1-Dichloroethylene	210501	C9E210297001	0.25	0.125	mg/L	U	0.25		2009		Barre	1	0.048
AZ	PWS 150	1,1-Dichloroethylene	714201	C9H050287001	0.25	0.125	mg/L	U	0.25		2009		Chandler	1	0.048
VA	PWS 150	1,1-Dichloroethylene	312101	C9I250178001	0.25	0.125	mg/L	U	0.25		2009		Chesapeake	1	0.048
OR	PWS 150	1,1-Dichloroethylene	714801	C9H150188001	0.25	0.125	mg/L	U	0.25		2009		Clackamas	1	0.048
NY	PWS 150	1,1-Dichloroethylene	200401	C9E210293001	0.25	0.125	mg/L	U	0.25		2009		Cohoes	1	0.048
KS	PWS 150	1,1-Dichloroethylene	619503	C9I240366001	0.25	0.125	mg/L	U	0.25		2009		Dodge City	1	0.048
NE	PWS 150	1,1-Dichloroethylene	506501	C9F100111001	0.25	0.125	mg/L	U	0.25		2009		Grand Island	1	0.011
NY	PWS 150	1,1-Dichloroethylene	202801	C9C280117001	0.25	0.125	mg/L	U	0.25		2009		Lackawanna	1	0.048
OK	PWS 150	1,1-Dichloroethylene	612401	C9G230261001	0.25	0.125	mg/L	U	0.25		2009		Oklahoma City	1	0.048
NC	PWS 150	1,1-Dichloroethylene	317101	C9F120357001	0.25	0.125	mg/L	U	0.25		2009		Raleigh	1	0.048
NC	PWS 150	1,1-Dichloroethylene	303102	C9G080306001	0.25	0.125	mg/L	U	0.25		2009		St. Paul	1	0.011
NY	PWS 150	1,1-Dichloroethylene	218701	C9C280112001	0.25	0.125	mg/L	U	0.25		2009		Syracuse	1	0.048
KS	PWS 150	1,1-Dichloroethylene	619501	C9F060174001	0.25	0.125	mg/L	U	0.25		2009		Wichita	1	0.011
NM	PWS 150	1,1-Dichloroethylene	700801	C7D180253001	0.25	0.125	mg/L	U	0.25		2007		Albuquerque		
NY	PWS 150	1,1-Dichloroethylene	202802	C7E230210001	0.25	0.125	mg/L	U	0.25		2007		Avon		
ID	PWS 150	1,1-Dichloroethylene	118308	C7F060245001	0.25	0.125	mg/L	U	0.25		2007		Boise		
AZ	PWS 150	1,1-Dichloroethylene	714201	C7H170374001	0.25	0.125	mg/L	U	0.25		2007		Chandler		
NC	PWS 150	1,1-Dichloroethylene	303101	C7H150248001	0.25	0.125	mg/L	U	0.25		2007		Charlotte		
NY	PWS 150	1,1-Dichloroethylene	200401	C7F260261001	0.25	0.125	mg/L	U	0.25		2007		Cohoes		
KS	PWS 150	1,1-Dichloroethylene	619503	C7H060166001	0.25	0.125	mg/L	U	0.25		2007		Dodge City		
NE	PWS 150	1,1-Dichloroethylene	506501	C7G260212001	0.25	0.125	mg/L	U	0.25		2007		Grand Island		
NC	PWS 150	1,1-Dichloroethylene	306401	C7G110239001	0.25	0.125	mg/L	U	0.25		2007		High Point		
OK	PWS 150	1,1-Dichloroethylene	612401	C7H160264001	0.25	0.125	mg/L	U	0.25		2007		Oklahoma City		
NE	PWS 150	1,1-Dichloroethylene	512701	C7H170363001	0.25	0.125	mg/L	U	0.25		2007		Omaha		
MO	PWS 150	1,1-Dichloroethylene	516003	C7G240284001	0.25	0.125	mg/L	U	0.25		2007		St. Charles		
NC	PWS 150	1,1-Dichloroethylene	303102	C7G120398001	0.25	0.125	mg/L	U	0.25		2007		St. Paul		
NY	PWS 150	1,1-Dichloroethylene	218701	C7F150407001	0.25	0.125	mg/L	U	0.25		2007		Syracuse		
OK	PWS 150	1,1-Dichloroethylene	619301	C7H020363001	0.25	0.125	mg/L	U	0.25		2007		Tulsa		
KS	PWS 150	1,1-Dichloroethylene	619501	C7G030446001	0.25	0.125	mg/L	U	0.25		2007		Wichita		
NY	PWS 150	1,1-Dichloroethylene	202801	C7F210325001	0.25	0.125	mg/L	U	0.25		2007		Lackawanna		
NC	PWS 150	1,1-Dichloroethylene	306401	C7G110239001	0.25	0.125	mg/L	U	0.25	37	2007	60	Archdale		
OR	PWS 150	1,1-Dichloroethylene	714801	C7I220107001	0.25	0.125	mg/L	U	0.25		2007		Clackamas		
NC	PWS 150	1,1-Dichloroethylene	306401	C8E300315001	0.25	0.125	mg/L	U	0.25		2008		Archdale		
NY	PWS 150	1,1-Dichloroethylene	202802	C8D300152001	0.25	0.125	mg/L	U	0.25		2008		Avon		
VT	PWS 150	1,1-Dichloroethylene	210501	C8G170336001	0.25	0.125	mg/L	U	0.25		2008		Barre		
ID	PWS 150	1,1-Dichloroethylene	118308	C8D290257001	0.25	0.125	mg/L	U	0.25		2008		Boise		
AZ	PWS 150	1,1-Dichloroethylene	714201	C8G310254001	0.25	0.125	mg/L	U	0.25		2008		Chandler		
VA	PWS 150	1,1-Dichloroethylene	312101	C8I100158001	0.25	0.125	mg/L	U	0.25		2008		Chesapeake		
VA	PWS 150	1,1-Dichloroethylene	315401	C8I160286001	0.25	0.125	mg/L	U	0.25		2008		Chester		
OR	PWS 150	1,1-Dichloroethylene	714801	C8H010298001	0.25	0.125	mg/L	U	0.25		2008		Clackamas		
NY	PWS 150	1,1-Dichloroethylene	200401	C8E020248001	0.25	0.125	mg/L	U	0.25		2008		Cohoes		
NE	PWS 150	1,1-Dichloroethylene	506501	C8F130243001	0.25	0.125	mg/L	U	0.25		2008		Grand Island		
NY	PWS 150	1,1-Dichloroethylene	202801	C8F270351001	0.25	0.125	mg/L	U	0.25		2008		Lackawanna		
NE	PWS 150	1,1-Dichloroethylene	512701	C8H010316001	0.25	0.125	mg/L	U	0.25		2008		Omaha		
NC	PWS 150	1,1-Dichloroethylene	317101	C8H060186001	0.25	0.125	mg/L	U	0.25		2008		Raleigh		
NY	PWS 150	1,1-Dichloroethylene	218701	C8E010345001	0.25	0.125	mg/L	U	0.25		2008		Syracuse		
FL	PWS 150	1,1-Dichloroethylene	307902	C8H140244001	0.25	0.125	mg/L	U	0.25		2008		Tallahassee		
OK	PWS 150	1,1-Dichloroethylene	619301	C8H130144001	0.25	0.125	mg/L	U	0.25		2008		Tulsa		
VA	PWS 150	1,1-Dichloroethylene	315501	C8H220293001	0.25	0.125	mg/L	U	0.25		2008		Vinton		
KS	PWS 150	1,1-Dichloroethylene	619501	C8F130240001	0.25	0.125	mg/L	U	0.25		2008		Wichita		
NC	PWS 150	1,1-Dichloroethylene	303102	C8J020304001	0.5	0.25	mg/L	U	0.5		2008		St. Paul	2	0.096
KS	PWS 150	1,1-Dichloroethylene	619503	C8I180216001	0.5	0.25	mg/L	U	0.5		2008		Dodge City		
BC	PWS 150	1,1-Dichloroethylene	818306	AR2008 8-183-06-3	100	50	mg/L	U	100		2008		Langley		
AB	PWS 150	1,1-Dichloroethylene	819401	L690481-6	100	50	mg/L	U	100		2008		Nisku		
ID	PWS 150	1,2-Dichloroethane	118308	C9D240220001	0.2	0.1	mg/L	U	0.2		2009		Boise	4	0.038
NC	PWS 150	1,2-Dichloroethane	303101	C8I230211001	0.25	0.125	mg/L	U	0.25		2008		Charlotte	1	0.06
OK	PWS 150	1,2-Dichloroethane	612401	C8I190324001	0.25	0.125	mg/L	U	0.25		2008		Oklahoma City	1	0.06
NC	PWS 150	1,2-Dichloroethane	306401	C9D160222001	0.25	0.125	mg/L	U	0.25		2009		Archdale	1	0.0096
NY	PWS 150	1,2-Dichloroethane	202802	C9C310110001	0.25	0.125	mg/L	U	0.25		2009		Avon	1	0.06
NY	PWS 150	1,2-Dichloroethane	202802	C9D020223001	0.25	0.125	mg/L	U	0.25		2009		Avon	1	0.06

State	CLIENT ID	PARAMETER	BRANCH ID	LAB SAMPLE ID	RESULT	Ranked Data	UNITS	QUALIFIER	REPORTING LIMIT	Uth	YEAR	Count	City	DILUTION FACTOR	MDL
VT	PWS 150	1,2-Dichloroethane	210501	C9E210297001	0.25	0.125	mg/L	U	0.25		2009		Barre	1	0.06
AZ	PWS 150	1,2-Dichloroethane	714201	C9H050287001	0.25	0.125	mg/L	U	0.25		2009		Chandler	1	0.06
VA	PWS 150	1,2-Dichloroethane	312101	C9I250178001	0.25	0.125	mg/L	U	0.25		2009		Chesapeake	1	0.06
OR	PWS 150	1,2-Dichloroethane	714801	C9H150188001	0.25	0.125	mg/L	U	0.25		2009		Clackamas	1	0.06
NY	PWS 150	1,2-Dichloroethane	200401	C9E210293001	0.25	0.125	mg/L	U	0.25		2009		Cohoes	1	0.06
KS	PWS 150	1,2-Dichloroethane	619503	C9I240366001	0.25	0.125	mg/L	U	0.25		2009		Dodge City	1	0.06
NE	PWS 150	1,2-Dichloroethane	506501	C9F100111001	0.25	0.125	mg/L	U	0.25		2009		Grand Island	1	0.0096
NY	PWS 150	1,2-Dichloroethane	202801	C9C280117001	0.25	0.125	mg/L	U	0.25		2009		Lackawanna	1	0.06
OK	PWS 150	1,2-Dichloroethane	612401	C9G230261001	0.25	0.125	mg/L	U	0.25		2009		Oklahoma City	1	0.06
NC	PWS 150	1,2-Dichloroethane	317101	C9F120357001	0.25	0.125	mg/L	U	0.25		2009		Raleigh	1	0.06
NC	PWS 150	1,2-Dichloroethane	303102	C9G080306001	0.25	0.125	mg/L	U	0.25		2009		St. Paul	1	0.0096
NY	PWS 150	1,2-Dichloroethane	218701	C9C280112001	0.25	0.125	mg/L	U	0.25		2009		Syracuse	1	0.06
KS	PWS 150	1,2-Dichloroethane	619501	C9F060174001	0.25	0.125	mg/L	U	0.25		2009		Wichita	1	0.0096
NM	PWS 150	1,2-Dichloroethane	700801	C7D180253001	0.25	0.125	mg/L	U	0.25		2007		Albuquerque		
NY	PWS 150	1,2-Dichloroethane	202802	C7E230210001	0.25	0.125	mg/L	U	0.25		2007		Avon		
ID	PWS 150	1,2-Dichloroethane	118308	C7F060245001	0.25	0.125	mg/L	U	0.25		2007		Boise		
AZ	PWS 150	1,2-Dichloroethane	714201	C7H170374001	0.25	0.125	mg/L	U	0.25		2007		Chandler		
NC	PWS 150	1,2-Dichloroethane	303101	C7H150248001	0.25	0.125	mg/L	U	0.25		2007		Charlotte		
NY	PWS 150	1,2-Dichloroethane	200401	C7F260261001	0.25	0.125	mg/L	U	0.25		2007		Cohoes		
KS	PWS 150	1,2-Dichloroethane	619503	C7H060166001	0.25	0.125	mg/L	U	0.25		2007		Dodge City		
NE	PWS 150	1,2-Dichloroethane	506501	C7G260212001	0.25	0.125	mg/L	U	0.25		2007		Grand Island		
NC	PWS 150	1,2-Dichloroethane	306401	C7G110239001	0.25	0.125	mg/L	U	0.25		2007		High Point		
OK	PWS 150	1,2-Dichloroethane	612401	C7H160264001	0.25	0.125	mg/L	U	0.25		2007		Oklahoma City		
NE	PWS 150	1,2-Dichloroethane	512701	C7H170363001	0.25	0.125	mg/L	U	0.25		2007		Omaha		
MO	PWS 150	1,2-Dichloroethane	516003	C7G240284001	0.25	0.125	mg/L	U	0.25		2007		St. Charles		
NC	PWS 150	1,2-Dichloroethane	303102	C7G120398001	0.25	0.125	mg/L	U	0.25		2007		St. Paul		
NY	PWS 150	1,2-Dichloroethane	218701	C7F150407001	0.25	0.125	mg/L	U	0.25		2007		Syracuse		
OK	PWS 150	1,2-Dichloroethane	619301	C7H020363001	0.25	0.125	mg/L	U	0.25		2007		Tulsa		
KS	PWS 150	1,2-Dichloroethane	619501	C7G030446001	0.25	0.125	mg/L	U	0.25		2007		Wichita		
NY	PWS 150	1,2-Dichloroethane	202801	C7F210325001	0.25	0.125	mg/L	U	0.25		2007		Lackawanna		
NC	PWS 150	1,2-Dichloroethane	306401	C7G110239001	0.25	0.125	mg/L	U	0.25	37	2007	60	Archdale		
OR	PWS 150	1,2-Dichloroethane	714801	C7I220107001	0.25	0.125	mg/L	U	0.25		2007		Clackamas		
NC	PWS 150	1,2-Dichloroethane	306401	C8E300315001	0.25	0.125	mg/L	U	0.25		2008		Archdale		
NY	PWS 150	1,2-Dichloroethane	202802	C8D300152001	0.25	0.125	mg/L	U	0.25		2008		Avon		
VT	PWS 150	1,2-Dichloroethane	210501	C8G170336001	0.25	0.125	mg/L	U	0.25		2008		Barre		
ID	PWS 150	1,2-Dichloroethane	118308	C8D290257001	0.25	0.125	mg/L	U	0.25		2008		Boise		
AZ	PWS 150	1,2-Dichloroethane	714201	C8G310254001	0.25	0.125	mg/L	U	0.25		2008		Chandler		
VA	PWS 150	1,2-Dichloroethane	312101	C8I100158001	0.25	0.125	mg/L	U	0.25		2008		Chesapeake		
VA	PWS 150	1,2-Dichloroethane	315401	C8I160286001	0.25	0.125	mg/L	U	0.25		2008		Chester		
OR	PWS 150	1,2-Dichloroethane	714801	C8H010298001	0.25	0.125	mg/L	U	0.25		2008		Clackamas		
NY	PWS 150	1,2-Dichloroethane	200401	C8E020248001	0.25	0.125	mg/L	U	0.25		2008		Cohoes		
NE	PWS 150	1,2-Dichloroethane	506501	C8F130243001	0.25	0.125	mg/L	U	0.25		2008		Grand Island		
NY	PWS 150	1,2-Dichloroethane	202801	C8F270351001	0.25	0.125	mg/L	U	0.25		2008		Lackawanna		
NE	PWS 150	1,2-Dichloroethane	512701	C8H010316001	0.25	0.125	mg/L	U	0.25		2008		Omaha		
NC	PWS 150	1,2-Dichloroethane	317101	C8H060186001	0.25	0.125	mg/L	U	0.25		2008		Raleigh		
NY	PWS 150	1,2-Dichloroethane	218701	C8E010345001	0.25	0.125	mg/L	U	0.25		2008		Syracuse		
FL	PWS 150	1,2-Dichloroethane	307902	C8H140244001	0.25	0.125	mg/L	U	0.25		2008		Tallahassee		
OK	PWS 150	1,2-Dichloroethane	619301	C8H130144001	0.25	0.125	mg/L	U	0.25		2008		Tulsa		
VA	PWS 150	1,2-Dichloroethane	315501	C8H220293001	0.25	0.125	mg/L	U	0.25		2008		Vinton		
KS	PWS 150	1,2-Dichloroethane	619501	C8F130240001	0.25	0.125	mg/L	U	0.25		2008		Wichita		
NC	PWS 150	1,2-Dichloroethane	303102	C8J020304001	0.5	0.25	mg/L	U	0.5		2008		St. Paul	2	0.12
KS	PWS 150	1,2-Dichloroethane	619503	C8I180216001	0.5	0.25	mg/L	U	0.5		2008		Dodge City		
BC	PWS 150	1,2-Dichloroethane	818306	AR2008 8-183-06-3	100	50	mg/L	U	100		2008		Langley		
AB	PWS 150	1,2-Dichloroethane	819401	L690481-6	100	50	mg/L	U	100		2008		Nisku		
ID	PWS 150	1,4-Dichlorobenzene	118308	C9D240220001	0.2	0.1	mg/L	U	0.2		2009		Boise	4	0.021
NC	PWS 150	1,4-Dichlorobenzene	303101	C8I230211001	0.25	0.125	mg/L	U	0.25		2008		Charlotte	1	0.23
OK	PWS 150	1,4-Dichlorobenzene	612401	C8I190324001	0.25	0.125	mg/L	U	0.25		2008		Oklahoma City	1	0.23
NC	PWS 150	1,4-Dichlorobenzene	306401	C9D160222001	0.25	0.125	mg/L	U	0.25		2009		Archdale	1	0.0053
NY	PWS 150	1,4-Dichlorobenzene	202802	C9C310110001	0.25	0.125	mg/L	U	0.25		2009		Avon	1	0.23
NY	PWS 150	1,4-Dichlorobenzene	202802	C9D020223001	0.25	0.125	mg/L	U	0.25		2009		Avon	1	0.23
VT	PWS 150	1,4-Dichlorobenzene	210501	C9E210297001	0.25	0.125	mg/L	U	0.25		2009		Barre	1	0.23
AZ	PWS 150	1,4-Dichlorobenzene	714201	C9H050287001	0.25	0.125	mg/L	U	0.25		2009		Chandler	1	0.23
VA	PWS 150	1,4-Dichlorobenzene	312101	C9I250178001	0.25	0.125	mg/L	U	0.25		2009		Chesapeake	1	0.23
OR	PWS 150	1,4-Dichlorobenzene	714801	C9H150188001	0.25	0.125	mg/L	U	0.25		2009		Clackamas	1	0.23
NY	PWS 150	1,4-Dichlorobenzene	200401	C9E210293001	0.25	0.125	mg/L	U	0.25		2009		Cohoes	1	0.23
KS	PWS 150	1,4-Dichlorobenzene	619503	C9I240366001	0.25	0.125	mg/L	U	0.25		2009		Dodge City	1	0.23

State	CLIENT ID	PARAMETER	BRANCH ID	LAB SAMPLE ID	RESULT	Ranked Data	UNITS	QUALIFIER	REPORTING LIMIT	Uth	YEAR	Count	City	DILUTION FACTOR	MDL
NY	PWS 150	1,4-Dichlorobenzene	202801	C9C280117001	0.25	0.125	mg/L	U	0.25		2009		Lackawanna	1	0.23
OK	PWS 150	1,4-Dichlorobenzene	612401	C9G230261001	0.25	0.125	mg/L	U	0.25		2009		Oklahoma City	1	0.23
NC	PWS 150	1,4-Dichlorobenzene	317101	C9F120357001	0.25	0.125	mg/L	U	0.25		2009		Raleigh	1	0.23
NC	PWS 150	1,4-Dichlorobenzene	303102	C9G080306001	0.25	0.125	mg/L	U	0.25		2009		St. Paul	1	0.0053
NY	PWS 150	1,4-Dichlorobenzene	218701	C9C280112001	0.25	0.125	mg/L	U	0.25		2009		Syracuse	1	0.23
KS	PWS 150	1,4-Dichlorobenzene	619501	C9F060174001	0.25	0.125	mg/L	U	0.25		2009		Wichita	1	0.0053
NM	PWS 150	1,4-Dichlorobenzene	700801	C7D180253001	0.25	0.125	mg/L	U	0.25		2007		Albuquerque		
NY	PWS 150	1,4-Dichlorobenzene	202802	C7E230210001	0.25	0.125	mg/L	U	0.25		2007		Avon		
ID	PWS 150	1,4-Dichlorobenzene	118308	C7F060245001	0.25	0.125	mg/L	U	0.25		2007		Boise		
AZ	PWS 150	1,4-Dichlorobenzene	714201	C7H170374001	0.25	0.125	mg/L	U	0.25		2007		Chandler		
NC	PWS 150	1,4-Dichlorobenzene	303101	C7H150248001	0.25	0.125	mg/L	U	0.25		2007		Charlotte		
KS	PWS 150	1,4-Dichlorobenzene	619503	C7H060166001	0.25	0.125	mg/L	U	0.25		2007		Dodge City		
NE	PWS 150	1,4-Dichlorobenzene	506501	C7G260212001	0.25	0.125	mg/L	U	0.25		2007		Grand Island		
NC	PWS 150	1,4-Dichlorobenzene	306401	C7G110239001	0.25	0.125	mg/L	U	0.25		2007		High Point		
NE	PWS 150	1,4-Dichlorobenzene	512701	C7H170363001	0.25	0.125	mg/L	U	0.25		2007		Omaha		
NC	PWS 150	1,4-Dichlorobenzene	303102	C7G120398001	0.25	0.125	mg/L	U	0.25		2007		St. Paul		
NY	PWS 150	1,4-Dichlorobenzene	218701	C7F150407001	0.25	0.125	mg/L	U	0.25		2007		Syracuse		
OK	PWS 150	1,4-Dichlorobenzene	619301	C7H020363001	0.25	0.125	mg/L	U	0.25		2007		Tulsa		
NC	PWS 150	1,4-Dichlorobenzene	306401	C7G110239001	0.25	0.125	mg/L	U	0.25		2007		Archdale		
OR	PWS 150	1,4-Dichlorobenzene	714801	C7I220107001	0.25	0.125	mg/L	U	0.25		2007		Clackamas		
NC	PWS 150	1,4-Dichlorobenzene	306401	C8E300315001	0.25	0.125	mg/L	U	0.25		2008		Archdale		
NY	PWS 150	1,4-Dichlorobenzene	202802	C8D300152001	0.25	0.125	mg/L	U	0.25		2008		Avon		
VT	PWS 150	1,4-Dichlorobenzene	210501	C8G170336001	0.25	0.125	mg/L	U	0.25		2008		Barre		
ID	PWS 150	1,4-Dichlorobenzene	118308	C8D290257001	0.25	0.125	mg/L	U	0.25		2008		Boise		
AZ	PWS 150	1,4-Dichlorobenzene	714201	C8G310254001	0.25	0.125	mg/L	U	0.25	37	2008	60	Chandler		
VA	PWS 150	1,4-Dichlorobenzene	312101	C8I100158001	0.25	0.125	mg/L	U	0.25		2008		Chesapeake		
VA	PWS 150	1,4-Dichlorobenzene	315401	C8I160286001	0.25	0.125	mg/L	U	0.25		2008		Chester		
OR	PWS 150	1,4-Dichlorobenzene	714801	C8H010298001	0.25	0.125	mg/L	U	0.25		2008		Clackamas		
NY	PWS 150	1,4-Dichlorobenzene	200401	C8E020248001	0.25	0.125	mg/L	U	0.25		2008		Cohoes		
NE	PWS 150	1,4-Dichlorobenzene	506501	C8F130243001	0.25	0.125	mg/L	U	0.25		2008		Grand Island		
NY	PWS 150	1,4-Dichlorobenzene	202801	C8F270351001	0.25	0.125	mg/L	U	0.25		2008		Lackawanna		
NE	PWS 150	1,4-Dichlorobenzene	512701	C8H010316001	0.25	0.125	mg/L	U	0.25		2008		Omaha		
NY	PWS 150	1,4-Dichlorobenzene	218701	C8E010345001	0.25	0.125	mg/L	U	0.25		2008		Syracuse		
FL	PWS 150	1,4-Dichlorobenzene	307902	C8H140244001	0.25	0.125	mg/L	U	0.25		2008		Tallahassee		
OK	PWS 150	1,4-Dichlorobenzene	619301	C8H130144001	0.25	0.125	mg/L	U	0.25		2008		Tulsa		
VA	PWS 150	1,4-Dichlorobenzene	315501	C8H220293001	0.25	0.125	mg/L	U	0.25		2008		Vinton		
KS	PWS 150	1,4-Dichlorobenzene	619501	C8F130240001	0.25	0.125	mg/L	U	0.25		2008		Wichita		
NC	PWS 150	1,4-Dichlorobenzene	303102	C8J020304001	0.5	0.25	mg/L	U	0.5		2008		St. Paul	2	0.46
KS	PWS 150	1,4-Dichlorobenzene	619503	C8I180216001	0.5	0.25	mg/L	U	0.5		2008		Dodge City		
NY	PWS 150	1,4-Dichlorobenzene	200401	C7F260261001	0.25	0.25	mg/L		0.25		2007		Cohoes		
OK	PWS 150	1,4-Dichlorobenzene	612401	C7H160264001	0.25	0.25	mg/L		0.25		2007		Oklahoma City		
KS	PWS 150	1,4-Dichlorobenzene	619501	C7G030446001	0.27	0.27	mg/L		0.25		2007		Wichita		
NE	PWS 150	1,4-Dichlorobenzene	506501	C9F100111001	0.28	0.28	mg/L		0.25		2009		Grand Island	1	0.0053
NC	PWS 150	1,4-Dichlorobenzene	317101	C8H060186001	0.48	0.48	mg/L		0.25		2008		Raleigh		
MO	PWS 150	1,4-Dichlorobenzene	516003	C7G240284001	0.6	0.6	mg/L		0.25		2007		St. Charles		
NY	PWS 150	1,4-Dichlorobenzene	202801	C7F210325001	12	12	mg/L		0.25		2007		Lackawanna		
BC	PWS 150	1,4-Dichlorobenzene	818306	AR2008 8-183-06-3	100	50	mg/L	U	100		2008		Langley		
AB	PWS 150	1,4-Dichlorobenzene	819401	L690481-6	100	50	mg/L	U	100		2008		Nisku		
ID	PWS 150	2,4,5-Trichlorophenol	118308	C9D240220001	0.05	0.025	mg/L	U	0.05		2009		Boise	1	0.00076
NE	PWS 150	2,4,5-Trichlorophenol	506501	C7G260212001	0.05	0.025	mg/L	U	0.05		2007		Grand Island		
MO	PWS 150	2,4,5-Trichlorophenol	516003	C7G240284001	0.05	0.025	mg/L	U	0.05		2007		St. Charles		
NY	PWS 150	2,4,5-Trichlorophenol	202802	C7E230210001	0.1	0.05	mg/L	U	0.1		2007		Avon		
NC	PWS 150	2,4,5-Trichlorophenol	306401	C7G110239001	0.1	0.05	mg/L	U	0.1		2007		High Point		
NC	PWS 150	2,4,5-Trichlorophenol	303102	C7G120398001	0.1	0.05	mg/L	U	0.1		2007		St. Paul		
KS	PWS 150	2,4,5-Trichlorophenol	619501	C7G030446001	0.1	0.05	mg/L	U	0.1		2007		Wichita		
NC	PWS 150	2,4,5-Trichlorophenol	306401	C7G110239001	0.1	0.05	mg/L	U	0.1		2007		Archdale		
NM	PWS 150	2,4,5-Trichlorophenol	700801	C7D180253001	0.13	0.065	mg/L	U	0.13		2007		Albuquerque		
ID	PWS 150	2,4,5-Trichlorophenol	118308	C7F060245001	0.13	0.065	mg/L	U	0.13		2007		Boise		
AZ	PWS 150	2,4,5-Trichlorophenol	714201	C7H170374001	0.13	0.065	mg/L	U	0.13		2007		Chandler		
NC	PWS 150	2,4,5-Trichlorophenol	303101	C7H150248001	0.13	0.065	mg/L	U	0.13		2007		Charlotte		
NY	PWS 150	2,4,5-Trichlorophenol	200401	C7F260261001	0.13	0.065	mg/L	U	0.13		2007		Cohoes		
KS	PWS 150	2,4,5-Trichlorophenol	619503	C7H060166001	0.13	0.065	mg/L	U	0.13		2007		Dodge City		
OK	PWS 150	2,4,5-Trichlorophenol	612401	C7H160264001	0.13	0.065	mg/L	U	0.13		2007		Oklahoma City		
NE	PWS 150	2,4,5-Trichlorophenol	512701	C7H170363001	0.13	0.065	mg/L	U	0.13		2007		Omaha		
NY	PWS 150	2,4,5-Trichlorophenol	218701	C7F150407001	0.13	0.065	mg/L	U	0.13		2007		Syracuse		
OK	PWS 150	2,4,5-Trichlorophenol	619301	C7H020363001	0.13	0.065	mg/L	U	0.13		2007		Tulsa		

State	CLIENT ID	PARAMETER	BRANCH ID	LAB SAMPLE ID	RESULT	Ranked Data	UNITS	QUALIFIER	REPORTING LIMIT	Uth	YEAR	Count	City	DILUTION FACTOR	MDL
NY	PWS 150	2,4,5-Trichlorophenol	202801	C7F210325001	0.13	0.065	mg/L	U	0.13		2007		Lackawanna		
NC	PWS 150	2,4,5-Trichlorophenol	306401	C7G110239001	0.13	0.065	mg/L	U	0.13		2007		Archdale		
BC	PWS 150	2,4,5-Trichlorophenol	818306	AR2008 8-183-06-3	1	0.5	mg/L	U	1		2008		Langley		
AB	PWS 150	2,4,5-Trichlorophenol	819401	L690481-6	1	0.5	mg/L	U	1		2008		Nisku		
NC	PWS 150	2,4,5-Trichlorophenol	303101	C8I230211001	400	200	mg/L	U	400		2008		Charlotte	1	
NC	PWS 150	2,4,5-Trichlorophenol	303102	C8J020304001	400	200	mg/L	U	400		2008		St. Paul	1	
OK	PWS 150	2,4,5-Trichlorophenol	612401	C8I190324001	400	200	mg/L	U	400		2008		Oklahoma City	1	
NC	PWS 150	2,4,5-Trichlorophenol	306401	C9D160222001	400	200	mg/L	U	400		2009		Archdale	1	
NY	PWS 150	2,4,5-Trichlorophenol	202802	C9C310110001	400	200	mg/L	U	400		2009		Avon	1	
NY	PWS 150	2,4,5-Trichlorophenol	202802	C9D020223001	400	200	mg/L	U	400		2009		Avon	1	
AZ	PWS 150	2,4,5-Trichlorophenol	714201	C9H050287001	400	200	mg/L	U	400		2009		Chandler	1	
VA	PWS 150	2,4,5-Trichlorophenol	312101	C9I250178001	400	200	mg/L	U	400		2009		Chesapeake	1	
OR	PWS 150	2,4,5-Trichlorophenol	714801	C9H150188001	400	200	mg/L	U	400		2009		Clackamas	1	
KS	PWS 150	2,4,5-Trichlorophenol	619503	C9I240366001	400	200	mg/L	U	400		2009		Dodge City	1	
NE	PWS 150	2,4,5-Trichlorophenol	506501	C9F100111001	400	200	mg/L	U	400		2009		Grand Island	1	
NY	PWS 150	2,4,5-Trichlorophenol	202801	C9C280117001	400	200	mg/L	U	400		2009		Lackawanna	1	
OK	PWS 150	2,4,5-Trichlorophenol	612401	C9G230261001	400	200	mg/L	U	400		2009		Oklahoma City	1	
NC	PWS 150	2,4,5-Trichlorophenol	317101	C9F120357001	400	200	mg/L	U	400		2009		Raleigh	1	
NC	PWS 150	2,4,5-Trichlorophenol	303102	C9G080306001	400	200	mg/L	U	400	37	2009	61	St. Paul	1	
NY	PWS 150	2,4,5-Trichlorophenol	218701	C9C280112001	400	200	mg/L	U	400		2009		Syracuse	1	
KS	PWS 150	2,4,5-Trichlorophenol	619501	C9F060174001	400	200	mg/L	U	400		2009		Wichita	1	
OR	PWS 150	2,4,5-Trichlorophenol	714801	C7I220107001	400	200	mg/L	U	400		2007		Clackamas		
NC	PWS 150	2,4,5-Trichlorophenol	306401	C8E300315001	400	200	mg/L	U	400		2008		Archdale		
NY	PWS 150	2,4,5-Trichlorophenol	202802	C8D300152001	400	200	mg/L	U	400		2008		Avon		
VT	PWS 150	2,4,5-Trichlorophenol	210501	C8G170336001	400	200	mg/L	U	400		2008		Barre		
ID	PWS 150	2,4,5-Trichlorophenol	118308	C8D290257001	400	200	mg/L	U	400		2008		Boise		
AZ	PWS 150	2,4,5-Trichlorophenol	714201	C8G310254001	400	200	mg/L	U	400		2008		Chandler		
VA	PWS 150	2,4,5-Trichlorophenol	312101	C8I100158001	400	200	mg/L	U	400		2008		Chesapeake		
VA	PWS 150	2,4,5-Trichlorophenol	315401	C8I160286001	400	200	mg/L	U	400		2008		Chester		
OR	PWS 150	2,4,5-Trichlorophenol	714801	C8H010298001	400	200	mg/L	U	400		2008		Clackamas		
NY	PWS 150	2,4,5-Trichlorophenol	200401	C8E020248001	400	200	mg/L	U	400		2008		Cohoes		
KS	PWS 150	2,4,5-Trichlorophenol	619503	C8I180216001	400	200	mg/L	U	400		2008		Dodge City		
NE	PWS 150	2,4,5-Trichlorophenol	506501	C8F130243001	400	200	mg/L	U	400		2008		Grand Island		
NY	PWS 150	2,4,5-Trichlorophenol	202801	C8F270351001	400	200	mg/L	U	400		2008		Lackawanna		
NE	PWS 150	2,4,5-Trichlorophenol	512701	C8H010316001	400	200	mg/L	U	400		2008		Omaha		
NC	PWS 150	2,4,5-Trichlorophenol	317101	C8H060186001	400	200	mg/L	U	400		2008		Raleigh		
NY	PWS 150	2,4,5-Trichlorophenol	218701	C8E010345001	400	200	mg/L	U	400		2008		Syracuse		
FL	PWS 150	2,4,5-Trichlorophenol	307902	C8H140244001	400	200	mg/L	U	400		2008		Tallahassee		
OK	PWS 150	2,4,5-Trichlorophenol	619301	C8H130144001	400	200	mg/L	U	400		2008		Tulsa		
VA	PWS 150	2,4,5-Trichlorophenol	315501	C8H220293001R2	400	200	mg/L	U	400		2008		Vinton		
KS	PWS 150	2,4,5-Trichlorophenol	619501	C8F130240001	400	200	mg/L	U	400		2008		Wichita		
VT	PWS 150	2,4,5-Trichlorophenol	210501	C9E210297001	2000	1000	mg/L	U	2000		2009		Barre	5	
NY	PWS 150	2,4,5-Trichlorophenol	200401	C9E210293001	2000	1000	mg/L	U	2000		2009		Cohoes	5	
ID	PWS 150	2,4,6-Trichlorophenol	118308	C9D240220001	0.05	0.025	mg/L	U	0.05		2009		Boise	1	0.00045
NE	PWS 150	2,4,6-Trichlorophenol	506501	C7G260212001	0.05	0.025	mg/L	U	0.05		2007		Grand Island		
MO	PWS 150	2,4,6-Trichlorophenol	516003	C7G240284001	0.05	0.025	mg/L	U	0.05		2007		St. Charles		
NY	PWS 150	2,4,6-Trichlorophenol	202802	C7E230210001	0.1	0.05	mg/L	U	0.1		2007		Avon		
NC	PWS 150	2,4,6-Trichlorophenol	306401	C7G110239001	0.1	0.05	mg/L	U	0.1		2007		High Point		
NC	PWS 150	2,4,6-Trichlorophenol	303102	C7G120398001	0.1	0.05	mg/L	U	0.1		2007		St. Paul		
KS	PWS 150	2,4,6-Trichlorophenol	619501	C7G030446001	0.1	0.05	mg/L	U	0.1		2007		Wichita		
NC	PWS 150	2,4,6-Trichlorophenol	306401	C7G110239001	0.1	0.05	mg/L	U	0.1		2007		Archdale		
NM	PWS 150	2,4,6-Trichlorophenol	700801	C7D180253001	0.13	0.065	mg/L	U	0.13		2007		Albuquerque		
ID	PWS 150	2,4,6-Trichlorophenol	118308	C7F060245001	0.13	0.065	mg/L	U	0.13		2007		Boise		
AZ	PWS 150	2,4,6-Trichlorophenol	714201	C7H170374001	0.13	0.065	mg/L	U	0.13		2007		Chandler		
NC	PWS 150	2,4,6-Trichlorophenol	303101	C7H150248001	0.13	0.065	mg/L	U	0.13		2007		Charlotte		
NY	PWS 150	2,4,6-Trichlorophenol	200401	C7F260261001	0.13	0.065	mg/L	U	0.13		2007		Cohoes		
KS	PWS 150	2,4,6-Trichlorophenol	619503	C7H060166001	0.13	0.065	mg/L	U	0.13		2007		Dodge City		
OK	PWS 150	2,4,6-Trichlorophenol	612401	C7H160264001	0.13	0.065	mg/L	U	0.13		2007		Oklahoma City		
NE	PWS 150	2,4,6-Trichlorophenol	512701	C7H170363001	0.13	0.065	mg/L	U	0.13		2007		Omaha		
NY	PWS 150	2,4,6-Trichlorophenol	218701	C7F150407001	0.13	0.065	mg/L	U	0.13		2007		Syracuse		
OK	PWS 150	2,4,6-Trichlorophenol	619301	C7H020363001	0.13	0.065	mg/L	U	0.13		2007		Tulsa		
NY	PWS 150	2,4,6-Trichlorophenol	202801	C7F210325001	0.13	0.065	mg/L	U	0.13		2007		Lackawanna		
NC	PWS 150	2,4,6-Trichlorophenol	306401	C7G110239001	0.13	0.065	mg/L	U	0.13		2007		Archdale		
BC	PWS 150	2,4,6-Trichlorophenol	818306	AR2008 8-183-06-3	1	0.5	mg/L	U	1		2008		Langley		
AB	PWS 150	2,4,6-Trichlorophenol	819401	L690481-6	1	0.5	mg/L	U	1		2008		Nisku		
NC	PWS 150	2,4,6-Trichlorophenol	303101	C8I230211001	2	1	mg/L	U	2		2008		Charlotte	1	

State	CLIENT ID	PARAMETER	BRANCH ID	LAB SAMPLE ID	RESULT	Ranked Data	UNITS	QUALIFIER	REPORTING LIMIT	Uth	YEAR	Count	City	DILUTION FACTOR	MDL
NC	PWS 150	2,4,6-Trichlorophenol	303102	C8J020304001	2	1	mg/L	U	2		2008		St. Paul	1	
OK	PWS 150	2,4,6-Trichlorophenol	612401	C8I190324001	2	1	mg/L	U	2		2008		Oklahoma City	1	
NC	PWS 150	2,4,6-Trichlorophenol	306401	C9D160222001	2	1	mg/L	U	2		2009		Archdale	1	
NY	PWS 150	2,4,6-Trichlorophenol	202802	C9C310110001	2	1	mg/L	U	2		2009		Avon	1	
NY	PWS 150	2,4,6-Trichlorophenol	202802	C9D020223001	2	1	mg/L	U	2		2009		Avon	1	
AZ	PWS 150	2,4,6-Trichlorophenol	714201	C9H050287001	2	1	mg/L	U	2		2009		Chandler	1	
VA	PWS 150	2,4,6-Trichlorophenol	312101	C9I250178001	2	1	mg/L	U	2		2009		Chesapeake	1	
OR	PWS 150	2,4,6-Trichlorophenol	714801	C9H150188001	2	1	mg/L	U	2		2009		Clackamas	1	
KS	PWS 150	2,4,6-Trichlorophenol	619503	C9I240366001	2	1	mg/L	U	2		2009		Dodge City	1	
NE	PWS 150	2,4,6-Trichlorophenol	506501	C9F100111001	2	1	mg/L	U	2		2009		Grand Island	1	
NY	PWS 150	2,4,6-Trichlorophenol	202801	C9C280117001	2	1	mg/L	U	2		2009		Lackawanna	1	
OK	PWS 150	2,4,6-Trichlorophenol	612401	C9G230261001	2	1	mg/L	U	2		2009		Oklahoma City	1	
NC	PWS 150	2,4,6-Trichlorophenol	317101	C9F120357001	2	1	mg/L	U	2		2009		Raleigh	1	
NC	PWS 150	2,4,6-Trichlorophenol	303102	C9G080306001	2	1	mg/L	U	2	37	2009	61	St. Paul	1	
NY	PWS 150	2,4,6-Trichlorophenol	218701	C9C280112001	2	1	mg/L	U	2		2009		Syracuse	1	
KS	PWS 150	2,4,6-Trichlorophenol	619501	C9F060174001	2	1	mg/L	U	2		2009		Wichita	1	
OR	PWS 150	2,4,6-Trichlorophenol	714801	C7I220107001	2	1	mg/L	U	2		2007		Clackamas		
NC	PWS 150	2,4,6-Trichlorophenol	306401	C8E300315001	2	1	mg/L	U	2		2008		Archdale		
NY	PWS 150	2,4,6-Trichlorophenol	202802	C8D300152001	2	1	mg/L	U	2		2008		Avon		
VT	PWS 150	2,4,6-Trichlorophenol	210501	C8G170336001	2	1	mg/L	U	2		2008		Barre		
ID	PWS 150	2,4,6-Trichlorophenol	118308	C8D290257001	2	1	mg/L	U	2		2008		Boise		
AZ	PWS 150	2,4,6-Trichlorophenol	714201	C8G310254001	2	1	mg/L	U	2		2008		Chandler		
VA	PWS 150	2,4,6-Trichlorophenol	312101	C8I100158001	2	1	mg/L	U	2		2008		Chesapeake		
VA	PWS 150	2,4,6-Trichlorophenol	315401	C8I160286001	2	1	mg/L	U	2		2008		Chester		
OR	PWS 150	2,4,6-Trichlorophenol	714801	C8H010298001	2	1	mg/L	U	2		2008		Clackamas		
NY	PWS 150	2,4,6-Trichlorophenol	200401	C8E020248001	2	1	mg/L	U	2		2008		Cohoes		
KS	PWS 150	2,4,6-Trichlorophenol	619503	C8I180216001	2	1	mg/L	U	2		2008		Dodge City		
NE	PWS 150	2,4,6-Trichlorophenol	506501	C8F130243001	2	1	mg/L	U	2		2008		Grand Island		
NY	PWS 150	2,4,6-Trichlorophenol	202801	C8F270351001	2	1	mg/L	U	2		2008		Lackawanna		
NE	PWS 150	2,4,6-Trichlorophenol	512701	C8H010316001	2	1	mg/L	U	2		2008		Omaha		
NC	PWS 150	2,4,6-Trichlorophenol	317101	C8H060186001	2	1	mg/L	U	2		2008		Raleigh		
NY	PWS 150	2,4,6-Trichlorophenol	218701	C8E010345001	2	1	mg/L	U	2		2008		Syracuse		
FL	PWS 150	2,4,6-Trichlorophenol	307902	C8H140244001	2	1	mg/L	U	2		2008		Tallahassee		
OK	PWS 150	2,4,6-Trichlorophenol	619301	C8H130144001	2	1	mg/L	U	2		2008		Tulsa		
VA	PWS 150	2,4,6-Trichlorophenol	315501	C8H220293001R2	2	1	mg/L	U	2		2008		Vinton		
KS	PWS 150	2,4,6-Trichlorophenol	619501	C8F130240001	2	1	mg/L	U	2		2008		Wichita		
VT	PWS 150	2,4,6-Trichlorophenol	210501	C9E210297001	10	5	mg/L	U	10		2009		Barre	5	
NY	PWS 150	2,4,6-Trichlorophenol	200401	C9E210293001	10	5	mg/L	U	10		2009		Cohoes	5	
ID	PWS 150	2,4-Dinitrotoluene	118308	C9D240220001	0.05	0.025	mg/L	U	0.05		2009		Boise	1	0.00083
NE	PWS 150	2,4-Dinitrotoluene	506501	C7G260212001	0.05	0.025	mg/L	U	0.05		2007		Grand Island		
NY	PWS 150	2,4-Dinitrotoluene	202802	C7E230210001	0.1	0.05	mg/L	U	0.1		2007		Avon		
NC	PWS 150	2,4-Dinitrotoluene	306401	C7G110239001	0.1	0.05	mg/L	U	0.1		2007		High Point		
NC	PWS 150	2,4-Dinitrotoluene	303102	C7G120398001	0.1	0.05	mg/L	U	0.1		2007		St. Paul		
KS	PWS 150	2,4-Dinitrotoluene	619501	C7G030446001	0.1	0.05	mg/L	U	0.1		2007		Wichita		
NC	PWS 150	2,4-Dinitrotoluene	306401	C7G110239001	0.1	0.05	mg/L	U	0.1		2007		Archdale		
NC	PWS 150	2,4-Dinitrotoluene	303101	C8I230211001	0.13	0.065	mg/L	U	0.13		2008		Charlotte	1	
NC	PWS 150	2,4-Dinitrotoluene	303102	C8J020304001	0.13	0.065	mg/L	U	0.13		2008		St. Paul	1	
OK	PWS 150	2,4-Dinitrotoluene	612401	C8I190324001	0.13	0.065	mg/L	U	0.13		2008		Oklahoma City	1	
NC	PWS 150	2,4-Dinitrotoluene	306401	C9D160222001	0.13	0.065	mg/L	U	0.13		2009		Archdale	1	
NY	PWS 150	2,4-Dinitrotoluene	202802	C9C310110001	0.13	0.065	mg/L	U	0.13		2009		Avon	1	
NY	PWS 150	2,4-Dinitrotoluene	202802	C9D020223001	0.13	0.065	mg/L	U	0.13		2009		Avon	1	
AZ	PWS 150	2,4-Dinitrotoluene	714201	C9H050287001	0.13	0.065	mg/L	U	0.13		2009		Chandler	1	
VA	PWS 150	2,4-Dinitrotoluene	312101	C9I250178001	0.13	0.065	mg/L	U	0.13		2009		Chesapeake	1	
OR	PWS 150	2,4-Dinitrotoluene	714801	C9H150188001	0.13	0.065	mg/L	U	0.13		2009		Clackamas	1	
KS	PWS 150	2,4-Dinitrotoluene	619503	C9I240366001	0.13	0.065	mg/L	U	0.13		2009		Dodge City	1	
NE	PWS 150	2,4-Dinitrotoluene	506501	C9F100111001	0.13	0.065	mg/L	U	0.13		2009		Grand Island	1	
NY	PWS 150	2,4-Dinitrotoluene	202801	C9C280117001	0.13	0.065	mg/L	U	0.13		2009		Lackawanna	1	
OK	PWS 150	2,4-Dinitrotoluene	612401	C9G230261001	0.13	0.065	mg/L	U	0.13		2009		Oklahoma City	1	
NC	PWS 150	2,4-Dinitrotoluene	317101	C9F120357001	0.13	0.065	mg/L	U	0.13		2009		Raleigh	1	
NC	PWS 150	2,4-Dinitrotoluene	303102	C9G080306001	0.13	0.065	mg/L	U	0.13		2009		St. Paul	1	
NY	PWS 150	2,4-Dinitrotoluene	218701	C9C280112001	0.13	0.065	mg/L	U	0.13		2009		Syracuse	1	
KS	PWS 150	2,4-Dinitrotoluene	619501	C9F060174001	0.13	0.065	mg/L	U	0.13		2009		Wichita	1	
NM	PWS 150	2,4-Dinitrotoluene	700801	C7D180253001	0.13	0.065	mg/L	U	0.13		2007		Albuquerque		
ID	PWS 150	2,4-Dinitrotoluene	118308	C7F060245001	0.13	0.065	mg/L	U	0.13		2007		Boise		
AZ	PWS 150	2,4-Dinitrotoluene	714201	C7H170374001	0.13	0.065	mg/L	U	0.13		2007		Chandler		
NC	PWS 150	2,4-Dinitrotoluene	303101	C7H150248001	0.13	0.065	mg/L	U	0.13		2007		Charlotte		

State	CLIENT ID	PARAMETER	BRANCH ID	LAB SAMPLE ID	RESULT	Ranked Data	UNITS	QUALIFIER	REPORTING LIMIT	Uth	YEAR	Count	City	DILUTION FACTOR	MDL
NY	PWS 150	2,4-Dinitrotoluene	200401	C7F260261001	0.13	0.065	mg/L	U	0.13		2007		Cohoes		
KS	PWS 150	2,4-Dinitrotoluene	619503	C7H060166001	0.13	0.065	mg/L	U	0.13		2007		Dodge City		
OK	PWS 150	2,4-Dinitrotoluene	612401	C7H160264001	0.13	0.065	mg/L	U	0.13		2007		Oklahoma City		
NE	PWS 150	2,4-Dinitrotoluene	512701	C7H170363001	0.13	0.065	mg/L	U	0.13		2007		Omaha		
NY	PWS 150	2,4-Dinitrotoluene	218701	C7F150407001	0.13	0.065	mg/L	U	0.13		2007		Syracuse		
OK	PWS 150	2,4-Dinitrotoluene	619301	C7H020363001	0.13	0.065	mg/L	U	0.13		2007		Tulsa		
NY	PWS 150	2,4-Dinitrotoluene	202801	C7F210325001	0.13	0.065	mg/L	U	0.13		2007		Lackawanna		
NC	PWS 150	2,4-Dinitrotoluene	306401	C7G110239001	0.13	0.065	mg/L	U	0.13		2007		Archdale		
OR	PWS 150	2,4-Dinitrotoluene	714801	C7I220107001	0.13	0.065	mg/L	U	0.13	37	2007	61	Clackamas		
NC	PWS 150	2,4-Dinitrotoluene	306401	C8E300315001	0.13	0.065	mg/L	U	0.13		2008		Archdale		
NY	PWS 150	2,4-Dinitrotoluene	202802	C8D300152001	0.13	0.065	mg/L	U	0.13		2008		Avon		
VT	PWS 150	2,4-Dinitrotoluene	210501	C8G170336001	0.13	0.065	mg/L	U	0.13		2008		Barre		
ID	PWS 150	2,4-Dinitrotoluene	118308	C8D290257001	0.13	0.065	mg/L	U	0.13		2008		Boise		
AZ	PWS 150	2,4-Dinitrotoluene	714201	C8G310254001	0.13	0.065	mg/L	U	0.13		2008		Chandler		
OR	PWS 150	2,4-Dinitrotoluene	714801	C8H010298001	0.13	0.065	mg/L	U	0.13		2008		Clackamas		
NY	PWS 150	2,4-Dinitrotoluene	200401	C8E020248001	0.13	0.065	mg/L	U	0.13		2008		Cohoes		
KS	PWS 150	2,4-Dinitrotoluene	619503	C8I180216001	0.13	0.065	mg/L	U	0.13		2008		Dodge City		
NE	PWS 150	2,4-Dinitrotoluene	506501	C8F130243001	0.13	0.065	mg/L	U	0.13		2008		Grand Island		
NY	PWS 150	2,4-Dinitrotoluene	202801	C8F270351001	0.13	0.065	mg/L	U	0.13		2008		Lackawanna		
NE	PWS 150	2,4-Dinitrotoluene	512701	C8H010316001	0.13	0.065	mg/L	U	0.13		2008		Omaha		
NC	PWS 150	2,4-Dinitrotoluene	317101	C8H060186001	0.13	0.065	mg/L	U	0.13		2008		Raleigh		
NY	PWS 150	2,4-Dinitrotoluene	218701	C8E010345001	0.13	0.065	mg/L	U	0.13		2008		Syracuse		
FL	PWS 150	2,4-Dinitrotoluene	307902	C8H140244001	0.13	0.065	mg/L	U	0.13		2008		Tallahassee		
OK	PWS 150	2,4-Dinitrotoluene	619301	C8H130144001	0.13	0.065	mg/L	U	0.13		2008		Tulsa		
VA	PWS 150	2,4-Dinitrotoluene	315501	C8H220293001R2	0.13	0.065	mg/L	U	0.13		2008		Vinton		
KS	PWS 150	2,4-Dinitrotoluene	619501	C8F130240001	0.13	0.065	mg/L	U	0.13		2008		Wichita		
MO	PWS 150	2,4-Dinitrotoluene	516003	C7G240284001	0.069	0.069	mg/L		0.05		2007		St. Charles		
VA	PWS 150	2,4-Dinitrotoluene	312101	C8I100158001	0.14	0.14	mg/L		0.13		2008		Chesapeake		
VA	PWS 150	2,4-Dinitrotoluene	315401	C8I160286001	0.31	0.31	mg/L		0.13		2008		Chester		
VT	PWS 150	2,4-Dinitrotoluene	210501	C9E210297001	0.65	0.325	mg/L	U	0.65		2009		Barre	5	
NY	PWS 150	2,4-Dinitrotoluene	200401	C9E210293001	0.65	0.325	mg/L	U	0.65		2009		Cohoes	5	
BC	PWS 150	2,4-Dinitrotoluene	818306	AR2008 8-183-06-3	10	5	mg/L	U	10		2008		Langley		
AB	PWS 150	2,4-Dinitrotoluene	819401	L690481-6	10	5	mg/L	U	10		2008		Nisku		
ID	PWS 150	2-Methylphenol	118308	C7F060245001	0.05	0.025	mg/L	U	0.05		2007		Boise		
AZ	PWS 150	2-Methylphenol	714201	C7H170374001	0.05	0.025	mg/L	U	0.05		2007		Chandler		
NC	PWS 150	2-Methylphenol	303101	C7H150248001	0.05	0.025	mg/L	U	0.05		2007		Charlotte		
KS	PWS 150	2-Methylphenol	619503	C7H060166001	0.05	0.025	mg/L	U	0.05		2007		Dodge City		
NE	PWS 150	2-Methylphenol	506501	C7G260212001	0.05	0.025	mg/L	U	0.05		2007		Grand Island		
OK	PWS 150	2-Methylphenol	612401	C7H160264001	0.05	0.025	mg/L	U	0.05		2007		Oklahoma City		
NE	PWS 150	2-Methylphenol	512701	C7H170363001	0.05	0.025	mg/L	U	0.05		2007		Omaha		
MO	PWS 150	2-Methylphenol	516003	C7G240284001	0.05	0.025	mg/L	U	0.05		2007		St. Charles		
NY	PWS 150	2-Methylphenol	218701	C7F150407001	0.05	0.025	mg/L	U	0.05		2007		Syracuse		
OK	PWS 150	2-Methylphenol	619301	C7H020363001	0.05	0.025	mg/L	U	0.05		2007		Tulsa		
NC	PWS 150	2-Methylphenol	303101	C8I230211001	0.1	0.05	mg/L	U	0.1		2008		Charlotte	1	0.000051
NC	PWS 150	2-Methylphenol	303102	C8J020304001	0.1	0.05	mg/L	U	0.1		2008		St. Paul	1	0.000051
OK	PWS 150	2-Methylphenol	612401	C8I190324001	0.1	0.05	mg/L	U	0.1		2008		Oklahoma City	1	0.000051
NC	PWS 150	2-Methylphenol	306401	C9D160222001	0.1	0.05	mg/L	U	0.1		2009		Archdale	1	0.000014
NY	PWS 150	2-Methylphenol	202802	C9C310110001	0.1	0.05	mg/L	U	0.1		2009		Avon	1	0.000014
NY	PWS 150	2-Methylphenol	202802	C9D020223001	0.1	0.05	mg/L	U	0.1		2009		Avon	1	0.000014
VT	PWS 150	2-Methylphenol	210501	C9E210297001	0.1	0.05	mg/L	U	0.1		2009		Barre	1	0.000014
AZ	PWS 150	2-Methylphenol	714201	C9H050287001	0.1	0.05	mg/L	U	0.1		2009		Chandler	1	0.000014
VA	PWS 150	2-Methylphenol	312101	C9I250178001	0.1	0.05	mg/L	U	0.1		2009		Chesapeake	1	0.000014
OR	PWS 150	2-Methylphenol	714801	C9H150188001	0.1	0.05	mg/L	U	0.1		2009		Clackamas	1	0.000014
NY	PWS 150	2-Methylphenol	200401	C9E210293001	0.1	0.05	mg/L	U	0.1		2009		Cohoes	1	0.000014
KS	PWS 150	2-Methylphenol	619503	C9I240366001	0.1	0.05	mg/L	U	0.1		2009		Dodge City	1	0.000014
NE	PWS 150	2-Methylphenol	506501	C9F100111001	0.1	0.05	mg/L	U	0.1		2009		Grand Island	1	0.000014
NY	PWS 150	2-Methylphenol	202801	C9C280117001	0.1	0.05	mg/L	U	0.1		2009		Lackawanna	1	0.000014
OK	PWS 150	2-Methylphenol	612401	C9G230261001	0.1	0.05	mg/L	U	0.1		2009		Oklahoma City	1	0.000014
NC	PWS 150	2-Methylphenol	317101	C9F120357001	0.1	0.05	mg/L	U	0.1		2009		Raleigh	1	0.000014
NC	PWS 150	2-Methylphenol	303102	C9G080306001	0.1	0.05	mg/L	U	0.1		2009		St. Paul	1	0.000014
NY	PWS 150	2-Methylphenol	218701	C9C280112001	0.1	0.05	mg/L	U	0.1		2009		Syracuse	1	0.000014
KS	PWS 150	2-Methylphenol	619501	C9F060174001	0.1	0.05	mg/L	U	0.1		2009		Wichita	1	0.000014
NM	PWS 150	2-Methylphenol	700801	C7D180253001	0.1	0.05	mg/L	U	0.1		2007		Albuquerque		
NY	PWS 150	2-Methylphenol	202802	C7E230210001	0.1	0.05	mg/L	U	0.1		2007		Avon		
NC	PWS 150	2-Methylphenol	306401	C7G110239001	0.1	0.05	mg/L	U	0.1		2007		High Point		
NC	PWS 150	2-Methylphenol	303102	C7G120398001	0.1	0.05	mg/L	U	0.1		2007		St. Paul		

State	CLIENT ID	PARAMETER	BRANCH ID	LAB SAMPLE ID	RESULT	Ranked Data	UNITS	QUALIFIER	REPORTING LIMIT	Uth	YEAR	Count	City	DILUTION FACTOR	MDL
KS	PWS 150	2-Methylphenol	619501	C7G030446001	0.1	0.05	mg/L	U	0.1		2007		Wichita		
NC	PWS 150	2-Methylphenol	306401	C7G110239001	0.1	0.05	mg/L	U	0.1		2007		Archdale		
OR	PWS 150	2-Methylphenol	714801	C7I220107001	0.1	0.05	mg/L	U	0.1		2007		Clackamas		
NY	PWS 150	2-Methylphenol	202802	C8D300152001	0.1	0.05	mg/L	U	0.1	37	2008	60	Avon		
VT	PWS 150	2-Methylphenol	210501	C8G170336001	0.1	0.05	mg/L	U	0.1		2008		Barre		
ID	PWS 150	2-Methylphenol	118308	C8D290257001	0.1	0.05	mg/L	U	0.1		2008		Boise		
AZ	PWS 150	2-Methylphenol	714201	C8G310254001	0.1	0.05	mg/L	U	0.1		2008		Chandler		
VA	PWS 150	2-Methylphenol	312101	C8I100158001	0.1	0.05	mg/L	U	0.1		2008		Chesapeake		
VA	PWS 150	2-Methylphenol	315401	C8I160286001	0.1	0.05	mg/L	U	0.1		2008		Chester		
OR	PWS 150	2-Methylphenol	714801	C8H010298001	0.1	0.05	mg/L	U	0.1		2008		Clackamas		
KS	PWS 150	2-Methylphenol	619503	C8I180216001	0.1	0.05	mg/L	U	0.1		2008		Dodge City		
NY	PWS 150	2-Methylphenol	202801	C8F270351001	0.1	0.05	mg/L	U	0.1		2008		Lackawanna		
NE	PWS 150	2-Methylphenol	512701	C8H010316001	0.1	0.05	mg/L	U	0.1		2008		Omaha		
NY	PWS 150	2-Methylphenol	218701	C8E010345001	0.1	0.05	mg/L	U	0.1		2008		Syracuse		
FL	PWS 150	2-Methylphenol	307902	C8H140244001	0.1	0.05	mg/L	U	0.1		2008		Tallahassee		
OK	PWS 150	2-Methylphenol	619301	C8H130144001	0.1	0.05	mg/L	U	0.1		2008		Tulsa		
VA	PWS 150	2-Methylphenol	315501	C8H220293001	0.1	0.05	mg/L	U	0.1		2008		Vinton		
KS	PWS 150	2-Methylphenol	619501	C8F130240001	0.1	0.05	mg/L	U	0.1		2008		Wichita		
ID	PWS 150	2-Methylphenol	118308	C9D240220001	0.088	0.088	mg/L		0.05		2009		Boise	1	0.0007
NC	PWS 150	2-Methylphenol	306401	C8E300315001	0.14	0.14	mg/L		0.1		2008		Archdale		
NE	PWS 150	2-Methylphenol	506501	C8F130243001	0.15	0.15	mg/L		0.1		2008		Grand Island		
NY	PWS 150	2-Methylphenol	200401	C8E020248001	0.19	0.19	mg/L		0.1		2008		Cohoes		
NC	PWS 150	2-Methylphenol	317101	C8H060186001	0.38	0.38	mg/L		0.1		2008		Raleigh		
NY	PWS 150	2-Methylphenol	200401	C7F260261001	0.65	0.65	mg/L		0.05		2007		Cohoes		
NY	PWS 150	2-Methylphenol	202801	C7F210325001	4.7	4.7	mg/L		0.05		2007		Lackawanna		
BC	PWS 150	2-Methylphenol	818306	AR2008 8-183-06-3	10	5	mg/L	U	10		2008		Langley		
AB	PWS 150	2-Methylphenol	819401	L690481-6	10	5	mg/L	U	10		2008		Nisku		
ID	PWS 150	3+4-Methylphenol	118308	C7F060245001	0.05	0.025	mg/L	U	0.05		2007		Boise		
NY	PWS 150	3+4-Methylphenol	218701	C7F150407001	0.05	0.025	mg/L	U	0.05		2007		Syracuse		
NC	PWS 150	3+4-Methylphenol	303101	C8I230211001	0.1	0.05	mg/L	U	0.1		2008		Charlotte	1	0.000074
NC	PWS 150	3+4-Methylphenol	303102	C8J020304001	0.1	0.05	mg/L	U	0.1		2008		St. Paul	1	0.000074
OK	PWS 150	3+4-Methylphenol	612401	C8I190324001	0.1	0.05	mg/L	U	0.1		2008		Oklahoma City	1	0.000074
NY	PWS 150	3+4-Methylphenol	202802	C9D020223001	0.1	0.05	mg/L	U	0.1		2009		Avon	1	0.000018
VT	PWS 150	3+4-Methylphenol	210501	C9E210297001	0.1	0.05	mg/L	U	0.1		2009		Barre	1	0.000018
NY	PWS 150	3+4-Methylphenol	200401	C9E210293001	0.1	0.05	mg/L	U	0.1		2009		Cohoes	1	0.000018
NY	PWS 150	3+4-Methylphenol	202801	C9C280117001	0.1	0.05	mg/L	U	0.1		2009		Lackawanna	1	0.000018
OK	PWS 150	3+4-Methylphenol	612401	C9G230261001	0.1	0.05	mg/L	U	0.1		2009		Oklahoma City	1	0.000018
NC	PWS 150	3+4-Methylphenol	303102	C9G080306001	0.1	0.05	mg/L	U	0.1		2009		St. Paul	1	0.000018
KS	PWS 150	3+4-Methylphenol	619501	C9F060174001	0.1	0.05	mg/L	U	0.1		2009		Wichita	1	0.000018
NM	PWS 150	3+4-Methylphenol	700801	C7D180253001	0.1	0.05	mg/L	U	0.1		2007		Albuquerque		
NY	PWS 150	3+4-Methylphenol	202802	C7E230210001	0.1	0.05	mg/L	U	0.1		2007		Avon		
NC	PWS 150	3+4-Methylphenol	306401	C7G110239001	0.1	0.05	mg/L	U	0.1		2007		High Point		
NC	PWS 150	3+4-Methylphenol	303102	C7G120398001	0.1	0.05	mg/L	U	0.1		2007		St. Paul		
NC	PWS 150	3+4-Methylphenol	306401	C7G110239001	0.1	0.05	mg/L	U	0.1		2007		Archdale		
OR	PWS 150	3+4-Methylphenol	714801	C7I220107001	0.1	0.05	mg/L	U	0.1		2007		Clackamas		
ID	PWS 150	3+4-Methylphenol	118308	C8D290257001	0.1	0.05	mg/L	U	0.1		2008		Boise		
AZ	PWS 150	3+4-Methylphenol	714201	C8G310254001	0.1	0.05	mg/L	U	0.1		2008		Chandler		
VA	PWS 150	3+4-Methylphenol	312101	C8I100158001	0.1	0.05	mg/L	U	0.1		2008		Chesapeake		
VA	PWS 150	3+4-Methylphenol	315401	C8I160286001	0.1	0.05	mg/L	U	0.1		2008		Chester		
OR	PWS 150	3+4-Methylphenol	714801	C8H010298001	0.1	0.05	mg/L	U	0.1		2008		Clackamas		
KS	PWS 150	3+4-Methylphenol	619503	C8I180216001	0.1	0.05	mg/L	U	0.1		2008		Dodge City		
NE	PWS 150	3+4-Methylphenol	506501	C8F130243001	0.1	0.05	mg/L	U	0.1		2008		Grand Island		
NY	PWS 150	3+4-Methylphenol	202801	C8F270351001	0.1	0.05	mg/L	U	0.1		2008		Lackawanna		
FL	PWS 150	3+4-Methylphenol	307902	C8H140244001	0.1	0.05	mg/L	U	0.1		2008		Tallahassee		
OK	PWS 150	3+4-Methylphenol	619301	C8H130144001	0.1	0.05	mg/L	U	0.1		2008		Tulsa		
VA	PWS 150	3+4-Methylphenol	315501	C8H220293001	0.1	0.05	mg/L	U	0.1		2008		Vinton		
KS	PWS 150	3+4-Methylphenol	619501	C8F130240001	0.1	0.05	mg/L	U	0.1		2008		Wichita		
NC	PWS 150	3+4-Methylphenol	303101	C7H150248001	0.059	0.059	mg/L		0.05		2007		Charlotte		
KS	PWS 150	3+4-Methylphenol	619503	C7H060166001	0.062	0.062	mg/L		0.05		2007		Dodge City		
OK	PWS 150	3+4-Methylphenol	619301	C7H020363001	0.066	0.066	mg/L		0.05		2007		Tulsa		
NC	PWS 150	3+4-Methylphenol	317101	C9F120357001	0.1	0.1	mg/L		0.1		2009		Raleigh	1	0.000018
NY	PWS 150	3+4-Methylphenol	218701	C8E010345001	0.11	0.11	mg/L		0.1		2008		Syracuse		
MO	PWS 150	3+4-Methylphenol	516003	C7G240284001	0.12	0.12	mg/L		0.05		2007		St. Charles		
NY	PWS 150	3+4-Methylphenol	202802	C9C310110001	0.12	0.12	mg/L		0.1	37	2009	60	Avon	1	0.000018
OK	PWS 150	3+4-Methylphenol	612401	C7H160264001	0.13	0.13	mg/L		0.05		2007		Oklahoma City		
NY	PWS 150	3+4-Methylphenol	202802	C8D300152001	0.13	0.13	mg/L		0.1		2008		Avon		

State	CLIENT ID	PARAMETER	BRANCH ID	LAB SAMPLE ID	RESULT	Ranked Data	UNITS	QUALIFIER	REPORTING LIMIT	Uth	YEAR	Count	City	DILUTION FACTOR	MDL
NE	PWS 150	3+4-Methylphenol	512701	C7H170363001	0.16	0.16	mg/L		0.05		2007		Omaha		
KS	PWS 150	3+4-Methylphenol	619503	C9I240366001	0.18	0.18	mg/L		0.1		2009		Dodge City	1	0.000018
NY	PWS 150	3+4-Methylphenol	200401	C8E020248001	0.19	0.19	mg/L		0.1		2008		Cohoes		
NE	PWS 150	3+4-Methylphenol	512701	C8H010316001	0.19	0.19	mg/L		0.1		2008		Omaha		
KS	PWS 150	3+4-Methylphenol	619501	C7G030446001	0.2	0.2	mg/L		0.1		2007		Wichita		
NY	PWS 150	3+4-Methylphenol	218701	C9C280112001	0.23	0.23	mg/L		0.1		2009		Syracuse	1	0.000018
NC	PWS 150	3+4-Methylphenol	306401	C9D160222001	0.24	0.24	mg/L		0.1		2009		Archdale	1	0.000018
AZ	PWS 150	3+4-Methylphenol	714201	C9H050287001	0.24	0.24	mg/L		0.1		2009		Chandler	1	0.000018
VT	PWS 150	3+4-Methylphenol	210501	C8G170336001	0.25	0.25	mg/L		0.1		2008		Barre		
VA	PWS 150	3+4-Methylphenol	312101	C9I250178001	0.27	0.27	mg/L		0.1		2009		Chesapeake	1	0.000018
NE	PWS 150	3+4-Methylphenol	506501	C9F100111001	0.28	0.28	mg/L		0.1		2009		Grand Island	1	0.000018
NC	PWS 150	3+4-Methylphenol	306401	C8E300315001	0.3	0.3	mg/L		0.1		2008		Archdale		
AZ	PWS 150	3+4-Methylphenol	714201	C7H170374001	0.33	0.33	mg/L		0.05		2007		Chandler		
NE	PWS 150	3+4-Methylphenol	506501	C7G260212001	0.41	0.41	mg/L		0.05		2007		Grand Island		
OR	PWS 150	3+4-Methylphenol	714801	C9H150188001	0.43	0.43	mg/L		0.1		2009		Clackamas	1	0.000018
ID	PWS 150	3+4-Methylphenol	118308	C9D240220001	0.75	0.75	mg/L		0.05		2009		Boise	1	0.00088
NY	PWS 150	3+4-Methylphenol	200401	C7F260261001	1.3	1.3	mg/L		0.05		2007		Cohoes		
NC	PWS 150	3+4-Methylphenol	317101	C8H060186001	2.1	2.1	mg/L		0.1		2008		Raleigh		
BC	PWS 150	3+4-Methylphenol	818306	AR2008 8-183-06-3	10	5	mg/L	U	10		2008		Langley		
AB	PWS 150	3+4-Methylphenol	819401	L690481-6	10	5	mg/L	U	10		2008		Nisku		
NY	PWS 150	3+4-Methylphenol	202801	C7F210325001	5	5	mg/L		0.05		2007		Lackawanna		
NC	PWS 150	Apparent Specific Gravity	303102	C8J020304001	0.74	0.74	No Units		0.01		2008		St. Paul	1	
NC	PWS 150	Apparent Specific Gravity	306401	C9D160222001	0.74	0.74	No Units		0.01		2009		Archdale	1	
AZ	PWS 150	Apparent Specific Gravity	714201	C9H050287001	0.74	0.74	No Units		0.01		2009		Chandler	1	
NY	PWS 150	Apparent Specific Gravity	202802	C9C310110001	0.75	0.75	No Units		0.01		2009		Avon	1	
NY	PWS 150	Apparent Specific Gravity	202802	C9D020223001	0.75	0.75	No Units		0.01		2009		Avon	1	
NY	PWS 150	Apparent Specific Gravity	200401	C9E210293001	0.75	0.75	No Units		0.01		2009		Cohoes	1	
NE	PWS 150	Apparent Specific Gravity	506501	C9F100111001	0.75	0.75	No Units		0.01		2009		Grand Island	1	
OK	PWS 150	Apparent Specific Gravity	612401	C9G230261001	0.75	0.75	No Units		0.01		2009		Oklahoma City	1	
NC	PWS 150	Apparent Specific Gravity	303102	C9G080306001	0.75	0.75	No Units		0.01		2009		St. Paul	1	
NY	PWS 150	Apparent Specific Gravity	202801	C9C280117001	0.76	0.76	No Units		0.01		2009		Lackawanna	1	
NY	PWS 150	Apparent Specific Gravity	218701	C9C280112001	0.76	0.76	No Units		0.01		2009		Syracuse	1	
NC	PWS 150	Apparent Specific Gravity	303101	C8I230211001	0.77	0.77	No Units		0.01		2008		Charlotte	1	
OK	PWS 150	Apparent Specific Gravity	612401	C8I190324001	0.77	0.77	No Units		0.01		2008		Oklahoma City	1	
VT	PWS 150	Apparent Specific Gravity	210501	C9E210297001	0.78	0.78	No Units		0.01		2009		Barre	1	
KS	PWS 150	Apparent Specific Gravity	619503	C9I240366001	0.78	0.78	No Units		0.01		2009		Dodge City	1	
KS	PWS 150	Apparent Specific Gravity	619501	C9F060174001	0.78	0.78	No Units		0.01		2009		Wichita	1	
NC	PWS 150	Apparent Specific Gravity	317101	C9F120357001	0.79	0.79	No Units		0.01		2009		Raleigh	1	
VA	PWS 150	Apparent Specific Gravity	312101	C9I250178001	0.8	0.8	No Units		0.01		2009		Chesapeake	1	
AB	PWS 150	Apparent Specific Gravity	819401	L690481-6	0.8	0.8	No Units				2008		Nisku		
BC	PWS 150	Apparent Specific Gravity	818306	AR2008 8-183-06-3	0.81	0.81	No Units				2008		Langley		
ID	PWS 150	Apparent Specific Gravity	118308	C9D240220001	1.1	1.1	No Units		0.01		2009		Boise	1	
ID	PWS 150	Arsenic	118308	C9D240220001	0.05	0.025	mg/L	U	0.05		2009		Boise	1	0.0027
BC	PWS 150	Arsenic	818306	AR2008 8-183-06-3	0.2	0.1	mg/L	U	0.2		2008		Langley		
AB	PWS 150	Arsenic	819401	L690481-6	0.2	0.1	mg/L	U	0.2		2008		Nisku		
NC	PWS 150	Arsenic	303101	C8I230211001	1	0.5	mg/L	U	1		2008		Charlotte	1	0.22
NC	PWS 150	Arsenic	303102	C8J020304001	1	0.5	mg/L	U	1		2008		St. Paul	1	0.22
OK	PWS 150	Arsenic	612401	C8I190324001	1	0.5	mg/L	U	1		2008		Oklahoma City	1	0.22
NC	PWS 150	Arsenic	306401	C9D160222001	1	0.5	mg/L	U	1		2009		Archdale	1	0.002
NY	PWS 150	Arsenic	202802	C9C310110001	1	0.5	mg/L	U	1		2009		Avon	1	0.002
NY	PWS 150	Arsenic	202802	C9D020223001	1	0.5	mg/L	U	1		2009		Avon	1	0.002
VT	PWS 150	Arsenic	210501	C9E210297001	1	0.5	mg/L	U	1		2009		Barre	1	0.002
AZ	PWS 150	Arsenic	714201	C9H050287001	1	0.5	mg/L	U	1		2009		Chandler	1	0.002
VA	PWS 150	Arsenic	312101	C9I250178001	1	0.5	mg/L	U	1		2009		Chesapeake	1	0.22
OR	PWS 150	Arsenic	714801	C9H150188001	1	0.5	mg/L	U	1		2009		Clackamas	1	0.002
NY	PWS 150	Arsenic	200401	C9E210293001	1	0.5	mg/L	U	1		2009		Cohoes	1	0.002
KS	PWS 150	Arsenic	619503	C9I240366001	1	0.5	mg/L	U	1		2009		Dodge City	1	0.22
NE	PWS 150	Arsenic	506501	C9F100111001	1	0.5	mg/L	U	1		2009		Grand Island	1	0.002
NY	PWS 150	Arsenic	202801	C9C280117001	1	0.5	mg/L	U	1		2009		Lackawanna	1	0.002
OK	PWS 150	Arsenic	612401	C9G230261001	1	0.5	mg/L	U	1		2009		Oklahoma City	1	0.002
NC	PWS 150	Arsenic	317101	C9F120357001	1	0.5	mg/L	U	1		2009		Raleigh	1	0.002
NC	PWS 150	Arsenic	303102	C9G080306001	1	0.5	mg/L	U	1		2009		St. Paul	1	0.002
NY	PWS 150	Arsenic	218701	C9C280112001	1	0.5	mg/L	U	1		2009		Syracuse	1	0.002
KS	PWS 150	Arsenic	619501	C9F060174001	1	0.5	mg/L	U	1		2009		Wichita	1	0.002
NM	PWS 150	Arsenic	700801	C7D180253001	1	0.5	mg/L	U	1		2007		Albuquerque		
NY	PWS 150	Arsenic	202802	C7E230210001	1	0.5	mg/L	U	1		2007		Avon		

State	CLIENT ID	PARAMETER	BRANCH ID	LAB SAMPLE ID	RESULT	Ranked Data	UNITS	QUALIFIER	REPORTING LIMIT	Uth	YEAR	Count	City	DILUTION FACTOR	MDL
ID	PWS 150	Arsenic	118308	C7F060245001	1	0.5	mg/L	U	1		2007		Boise		
AZ	PWS 150	Arsenic	714201	C7H170374001	1	0.5	mg/L	U	1		2007		Chandler		
NC	PWS 150	Arsenic	303101	C7H150248001	1	0.5	mg/L	U	1		2007		Charlotte		
NY	PWS 150	Arsenic	200401	C7F260261001	1	0.5	mg/L	U	1		2007		Cohoes		
KS	PWS 150	Arsenic	619503	C7H060166001	1	0.5	mg/L	U	1		2007		Dodge City		
NE	PWS 150	Arsenic	506501	C7G260212001	1	0.5	mg/L	U	1		2007		Grand Island		
NC	PWS 150	Arsenic	306401	C7G110239001	1	0.5	mg/L	U	1		2007		High Point		
OK	PWS 150	Arsenic	612401	C7H160264001	1	0.5	mg/L	U	1		2007		Oklahoma City		
NE	PWS 150	Arsenic	512701	C7H170363001	1	0.5	mg/L	U	1		2007		Omaha		
MO	PWS 150	Arsenic	516003	C7G240284001	1	0.5	mg/L	U	1		2007		St. Charles		
NC	PWS 150	Arsenic	303102	C7G120398001	1	0.5	mg/L	U	1		2007		St. Paul		
NY	PWS 150	Arsenic	218701	C7F150407001	1	0.5	mg/L	U	1		2007		Syracuse		
OK	PWS 150	Arsenic	619301	C7H020363001	1	0.5	mg/L	U	1	37	2007	60	Tulsa		
KS	PWS 150	Arsenic	619501	C7G030446001	1	0.5	mg/L	U	1		2007		Wichita		
NY	PWS 150	Arsenic	202801	C7F210325001	1	0.5	mg/L	U	1		2007		Lackawanna		
NC	PWS 150	Arsenic	306401	C7G110239001	1	0.5	mg/L	U	1		2007		Archdale		
OR	PWS 150	Arsenic	714801	C7I220107001	1	0.5	mg/L	U	1		2007		Clackamas		
NC	PWS 150	Arsenic	306401	C8E300315001	1	0.5	mg/L	U	1		2008		Archdale		
NY	PWS 150	Arsenic	202802	C8D300152001	1	0.5	mg/L	U	1		2008		Avon		
VT	PWS 150	Arsenic	210501	C8G170336001	1	0.5	mg/L	U	1		2008		Barre		
ID	PWS 150	Arsenic	118308	C8D290257001	1	0.5	mg/L	U	1		2008		Boise		
AZ	PWS 150	Arsenic	714201	C8G310254001	1	0.5	mg/L	U	1		2008		Chandler		
VA	PWS 150	Arsenic	312101	C8I100158001	1	0.5	mg/L	U	1		2008		Chesapeake		
VA	PWS 150	Arsenic	315401	C8I160286001	1	0.5	mg/L	U	1		2008		Chester		
OR	PWS 150	Arsenic	714801	C8H010298001	1	0.5	mg/L	U	1		2008		Clackamas		
NY	PWS 150	Arsenic	200401	C8E020248001	1	0.5	mg/L	U	1		2008		Cohoes		
KS	PWS 150	Arsenic	619503	C8I180216001	1	0.5	mg/L	U	1		2008		Dodge City		
NE	PWS 150	Arsenic	506501	C8F130243001	1	0.5	mg/L	U	1		2008		Grand Island		
NY	PWS 150	Arsenic	202801	C8F270351001	1	0.5	mg/L	U	1		2008		Lackawanna		
NE	PWS 150	Arsenic	512701	C8H010316001	1	0.5	mg/L	U	1		2008		Omaha		
NC	PWS 150	Arsenic	317101	C8H060186001	1	0.5	mg/L	U	1		2008		Raleigh		
NY	PWS 150	Arsenic	218701	C8E010345001	1	0.5	mg/L	U	1		2008		Syracuse		
FL	PWS 150	Arsenic	307902	C8H140244001	1	0.5	mg/L	U	1		2008		Tallahassee		
OK	PWS 150	Arsenic	619301	C8H130144001	1	0.5	mg/L	U	1		2008		Tulsa		
VA	PWS 150	Arsenic	315501	C8H220293001	1	0.5	mg/L	U	1		2008		Vinton		
KS	PWS 150	Arsenic	619501	C8F130240001	1	0.5	mg/L	U	1		2008		Wichita		
ID	PWS 150	Barium	118308	C9D240220001	0.23	0.23	mg/L		0.2		2009		Boise	1	0.00062
BC	PWS 150	Barium	818306	AR2008 8-183-06-3	5.0	2.5	mg/L	U	5.0		2008		Langley		
AB	PWS 150	Barium	819401	L690481-6	5	2.5	mg/L	U	5		2008		Nisku		
NC	PWS 150	Barium	303101	C8I230211001	20	10	mg/L	U	20		2008		Charlotte	1	0.01
NC	PWS 150	Barium	303102	C8J020304001	20	10	mg/L	U	20		2008		St. Paul	1	0.01
OK	PWS 150	Barium	612401	C8I190324001	20	10	mg/L	U	20		2008		Oklahoma City	1	0.01
NC	PWS 150	Barium	306401	C9D160222001	20	10	mg/L	U	20		2009		Archdale	1	0.00026
NY	PWS 150	Barium	202802	C9C310110001	20	10	mg/L	U	20		2009		Avon	1	0.00026
NY	PWS 150	Barium	202802	C9D020223001	20	10	mg/L	U	20		2009		Avon	1	0.00026
VT	PWS 150	Barium	210501	C9E210297001	20	10	mg/L	U	20		2009		Barre	1	0.00026
AZ	PWS 150	Barium	714201	C9H050287001	20	10	mg/L	U	20		2009		Chandler	1	0.00026
VA	PWS 150	Barium	312101	C9I250178001	20	10	mg/L	U	20		2009		Chesapeake	1	0.05
OR	PWS 150	Barium	714801	C9H150188001	20	10	mg/L	U	20		2009		Clackamas	1	0.00026
NY	PWS 150	Barium	200401	C9E210293001	20	10	mg/L	U	20		2009		Cohoes	1	0.00026
KS	PWS 150	Barium	619503	C9I240366001	20	10	mg/L	U	20		2009		Dodge City	1	0.05
NE	PWS 150	Barium	506501	C9F100111001	20	10	mg/L	U	20		2009		Grand Island	1	0.00026
NY	PWS 150	Barium	202801	C9C280117001	20	10	mg/L	U	20		2009		Lackawanna	1	0.00026
OK	PWS 150	Barium	612401	C9G230261001	20	10	mg/L	U	20		2009		Oklahoma City	1	0.00026
NC	PWS 150	Barium	317101	C9F120357001	20	10	mg/L	U	20		2009		Raleigh	1	0.00026
NC	PWS 150	Barium	303102	C9G080306001	20	10	mg/L	U	20		2009		St. Paul	1	0.00026
NY	PWS 150	Barium	218701	C9C280112001	20	10	mg/L	U	20		2009		Syracuse	1	0.00026
KS	PWS 150	Barium	619501	C9F060174001	20	10	mg/L	U	20		2009		Wichita	1	0.00026
NM	PWS 150	Barium	700801	C7D180253001	20	10	mg/L	U	20		2007		Albuquerque		
NY	PWS 150	Barium	202802	C7E230210001	20	10	mg/L	U	20		2007		Avon		
ID	PWS 150	Barium	118308	C7F060245001	20	10	mg/L	U	20		2007		Boise		
AZ	PWS 150	Barium	714201	C7H170374001	20	10	mg/L	U	20		2007		Chandler		
NC	PWS 150	Barium	303101	C7H150248001	20	10	mg/L	U	20		2007		Charlotte		
NY	PWS 150	Barium	200401	C7F260261001	20	10	mg/L	U	20		2007		Cohoes		
KS	PWS 150	Barium	619503	C7H060166001	20	10	mg/L	U	20		2007		Dodge City		
NE	PWS 150	Barium	506501	C7G260212001	20	10	mg/L	U	20		2007		Grand Island		

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NC	PWS 150	Barium	306401	C7G110239001	20	10	mg/L	U	20		2007		High Point		
OK	PWS 150	Barium	612401	C7H160264001	20	10	mg/L	U	20		2007		Oklahoma City		
NE	PWS 150	Barium	512701	C7H170363001	20	10	mg/L	U	20		2007		Omaha		
MO	PWS 150	Barium	516003	C7G240284001	20	10	mg/L	U	20		2007		St. Charles		
NC	PWS 150	Barium	303102	C7G120398001	20	10	mg/L	U	20		2007		St. Paul		
NY	PWS 150	Barium	218701	C7F150407001	20	10	mg/L	U	20		2007		Syracuse		
OK	PWS 150	Barium	619301	C7H020363001	20	10	mg/L	U	20	37	2007	60	Tulsa		
KS	PWS 150	Barium	619501	C7G030446001	20	10	mg/L	U	20		2007		Wichita		
NY	PWS 150	Barium	202801	C7F210325001	20	10	mg/L	U	20		2007		Lackawanna		
NC	PWS 150	Barium	306401	C7G110239001	20	10	mg/L	U	20		2007		Archdale		
OR	PWS 150	Barium	714801	C7I220107001	20	10	mg/L	U	20		2007		Clackamas		
NC	PWS 150	Barium	306401	C8E300315001	20	10	mg/L	U	20		2008		Archdale		
NY	PWS 150	Barium	202802	C8D300152001	20	10	mg/L	U	20		2008		Avon		
VT	PWS 150	Barium	210501	C8G170336001	20	10	mg/L	U	20		2008		Barre		
ID	PWS 150	Barium	118308	C8D290257001	20	10	mg/L	U	20		2008		Boise		
AZ	PWS 150	Barium	714201	C8G310254001	20	10	mg/L	U	20		2008		Chandler		
VA	PWS 150	Barium	312101	C8I100158001	20	10	mg/L	U	20		2008		Chesapeake		
VA	PWS 150	Barium	315401	C8I160286001	20	10	mg/L	U	20		2008		Chester		
OR	PWS 150	Barium	714801	C8H010298001	20	10	mg/L	U	20		2008		Clackamas		
NY	PWS 150	Barium	200401	C8E020248001	20	10	mg/L	U	20		2008		Cohoes		
KS	PWS 150	Barium	619503	C8I180216001	20	10	mg/L	U	20		2008		Dodge City		
NE	PWS 150	Barium	506501	C8F130243001	20	10	mg/L	U	20		2008		Grand Island		
NY	PWS 150	Barium	202801	C8F270351001	20	10	mg/L	U	20		2008		Lackawanna		
NE	PWS 150	Barium	512701	C8H010316001	20	10	mg/L	U	20		2008		Omaha		
NC	PWS 150	Barium	317101	C8H060186001	20	10	mg/L	U	20		2008		Raleigh		
NY	PWS 150	Barium	218701	C8E010345001	20	10	mg/L	U	20		2008		Syracuse		
FL	PWS 150	Barium	307902	C8H140244001	20	10	mg/L	U	20		2008		Tallahassee		
OK	PWS 150	Barium	619301	C8H130144001	20	10	mg/L	U	20		2008		Tulsa		
VA	PWS 150	Barium	315501	C8H220293001	20	10	mg/L	U	20		2008		Vinton		
KS	PWS 150	Barium	619501	C8F130240001	20	10	mg/L	U	20		2008		Wichita		
ID	PWS 150	Benzene	118308	C9D240220001	0.2	0.1	mg/L	U	0.2		2009		Boise	4	0.04
NC	PWS 150	Benzene	303101	C8I230211001	0.25	0.125	mg/L	U	0.25		2008		Charlotte	1	0.035
OK	PWS 150	Benzene	612401	C8I190324001	0.25	0.125	mg/L	U	0.25		2008		Oklahoma City	1	0.035
NC	PWS 150	Benzene	306401	C9D160222001	0.25	0.125	mg/L	U	0.25		2009		Archdale	1	0.0099
NY	PWS 150	Benzene	202802	C9C310110001	0.25	0.125	mg/L	U	0.25		2009		Avon	1	0.035
NY	PWS 150	Benzene	202802	C9D020223001	0.25	0.125	mg/L	U	0.25		2009		Avon	1	0.035
AZ	PWS 150	Benzene	714201	C9H050287001	0.25	0.125	mg/L	U	0.25		2009		Chandler	1	0.035
OR	PWS 150	Benzene	714801	C9H150188001	0.25	0.125	mg/L	U	0.25		2009		Clackamas	1	0.035
NY	PWS 150	Benzene	200401	C9E210293001	0.25	0.125	mg/L	U	0.25		2009		Cohoes	1	0.035
NY	PWS 150	Benzene	202801	C9C280117001	0.25	0.125	mg/L	U	0.25		2009		Lackawanna	1	0.035
NC	PWS 150	Benzene	317101	C9F120357001	0.25	0.125	mg/L	U	0.25		2009		Raleigh	1	0.035
NC	PWS 150	Benzene	303102	C9G080306001	0.25	0.125	mg/L	U	0.25		2009		St. Paul	1	0.0099
NY	PWS 150	Benzene	218701	C9C280112001	0.25	0.125	mg/L	U	0.25		2009		Syracuse	1	0.035
KS	PWS 150	Benzene	619501	C9F060174001	0.25	0.125	mg/L	U	0.25		2009		Wichita	1	0.0099
NM	PWS 150	Benzene	700801	C7D180253001	0.25	0.125	mg/L	U	0.25		2007		Albuquerque		
ID	PWS 150	Benzene	118308	C7F060245001	0.25	0.125	mg/L	U	0.25		2007		Boise		
AZ	PWS 150	Benzene	714201	C7H170374001	0.25	0.125	mg/L	U	0.25		2007		Chandler		
NY	PWS 150	Benzene	200401	C7F260261001	0.25	0.125	mg/L	U	0.25		2007		Cohoes		
KS	PWS 150	Benzene	619503	C7H060166001	0.25	0.125	mg/L	U	0.25		2007		Dodge City		
NE	PWS 150	Benzene	506501	C7G260212001	0.25	0.125	mg/L	U	0.25		2007		Grand Island		
NC	PWS 150	Benzene	306401	C7G110239001	0.25	0.125	mg/L	U	0.25		2007		High Point		
MO	PWS 150	Benzene	516003	C7G240284001	0.25	0.125	mg/L	U	0.25		2007		St. Charles		
NC	PWS 150	Benzene	303102	C7G120398001	0.25	0.125	mg/L	U	0.25		2007		St. Paul		
NC	PWS 150	Benzene	306401	C7G110239001	0.25	0.125	mg/L	U	0.25		2007		Archdale		
OR	PWS 150	Benzene	714801	C7I220107001	0.25	0.125	mg/L	U	0.25		2007		Clackamas		
NC	PWS 150	Benzene	306401	C8E300315001	0.25	0.125	mg/L	U	0.25		2008		Archdale		
ID	PWS 150	Benzene	118308	C8D290257001	0.25	0.125	mg/L	U	0.25		2008		Boise		
AZ	PWS 150	Benzene	714201	C8G310254001	0.25	0.125	mg/L	U	0.25		2008		Chandler		
OR	PWS 150	Benzene	714801	C8H010298001	0.25	0.125	mg/L	U	0.25		2008		Clackamas		
NY	PWS 150	Benzene	200401	C8E020248001	0.25	0.125	mg/L	U	0.25		2008		Cohoes		
NE	PWS 150	Benzene	506501	C8F130243001	0.25	0.125	mg/L	U	0.25		2008		Grand Island		
NE	PWS 150	Benzene	512701	C8H010316001	0.25	0.125	mg/L	U	0.25		2008		Omaha		
NC	PWS 150	Benzene	317101	C8H060186001	0.25	0.125	mg/L	U	0.25		2008		Raleigh		
NY	PWS 150	Benzene	218701	C8E010345001	0.25	0.125	mg/L	U	0.25		2008		Syracuse		
FL	PWS 150	Benzene	307902	C8H140244001	0.25	0.125	mg/L	U	0.25		2008		Tallahassee		
KS	PWS 150	Benzene	619501	C8F130240001	0.25	0.125	mg/L	U	0.25		2008		Wichita		

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NC	PWS 150	Benzene	303102	C8J020304001	0.5	0.25	mg/L	U	0.5	37	2008	60	St. Paul	2	0.07
KS	PWS 150	Benzene	619503	C8I180216001	0.5	0.25	mg/L	U	0.5		2008		Dodge City		
NY	PWS 150	Benzene	202802	C7E230210001	0.25	0.25	mg/L		0.25		2007		Avon		
VT	PWS 150	Benzene	210501	C9E210297001	0.29	0.29	mg/L		0.25		2009		Barre	1	0.035
OK	PWS 150	Benzene	612401	C7H160264001	0.37	0.37	mg/L		0.25		2007		Oklahoma City		
NY	PWS 150	Benzene	218701	C7F150407001	0.37	0.37	mg/L		0.25		2007		Syracuse		
KS	PWS 150	Benzene	619503	C9I240366001	0.42	0.42	mg/L		0.25		2009		Dodge City	1	0.035
VA	PWS 150	Benzene	312101	C8I100158001	0.49	0.49	mg/L		0.25		2008		Chesapeake		
NE	PWS 150	Benzene	506501	C9F100111001	0.5	0.5	mg/L		0.25		2009		Grand Island	1	0.0099
KS	PWS 150	Benzene	619501	C7G030446001	0.57	0.57	mg/L		0.25		2007		Wichita		
VA	PWS 150	Benzene	315401	C8I160286001	0.58	0.58	mg/L		0.25		2008		Chester		
NC	PWS 150	Benzene	303101	C7H150248001	0.69	0.69	mg/L		0.25		2007		Charlotte		
NY	PWS 150	Benzene	202801	C8F270351001	0.82	0.82	mg/L		0.25		2008		Lackawanna		
NY	PWS 150	Benzene	202802	C8D300152001	0.9	0.9	mg/L		0.25		2008		Avon		
OK	PWS 150	Benzene	619301	C7H020363001	0.96	0.96	mg/L		0.25		2007		Tulsa		
VA	PWS 150	Benzene	315501	C8H220293001	1.7	1.7	mg/L		0.25		2008		Vinton		
OK	PWS 150	Benzene	612401	C9G230261001	1.9	1.9	mg/L		0.25		2009		Oklahoma City	1	0.035
NE	PWS 150	Benzene	512701	C7H170363001	2.7	2.7	mg/L		0.25		2007		Omaha		
VA	PWS 150	Benzene	312101	C9I250178001	3.5	3.5	mg/L		0.25		2009		Chesapeake	1	0.035
OK	PWS 150	Benzene	619301	C8H130144001	4.4	4.4	mg/L		0.25		2008		Tulsa		
VT	PWS 150	Benzene	210501	C8G170336001	47	47	mg/L		2.5		2008		Barre		
BC	PWS 150	Benzene	818306	AR2008 8-183-06-3	100	50	mg/L	U	100		2008		Langley		
AB	PWS 150	Benzene	819401	L690481-6	100	50	mg/L	U	100		2008		Nisku		
NY	PWS 150	Benzene	202801	C7F210325001R2	1100	1100	mg/L		250		2007		Lackawanna		
OR	PWS 150	Bulk Density	714801	C9H150188001	0.78	0.78	g/cc		0.01		2009		Clackamas	1	
BC	PWS 150	Cadmium	818306	AR2008 8-183-06-3	0.05	0.025	mg/L	U	0.05		2008		Langley		
AB	PWS 150	Cadmium	819401	L690481-6	0.05	0.025	mg/L	U	0.05		2008		Nisku		
ID	PWS 150	Cadmium	118308	C9D240220001	0.14	0.14	mg/L		0.05		2009		Boise	1	0.00013
NC	PWS 150	Cadmium	303101	C8I230211001	0.5	0.25	mg/L	U	0.5		2008		Charlotte	1	0.023
NC	PWS 150	Cadmium	303102	C8J020304001	0.5	0.25	mg/L	U	0.5		2008		St. Paul	1	0.023
OK	PWS 150	Cadmium	612401	C8I190324001	0.5	0.25	mg/L	U	0.5		2008		Oklahoma City	1	0.023
NC	PWS 150	Cadmium	306401	C9D160222001	0.5	0.25	mg/L	U	0.5		2009		Archdale	1	0.00021
NY	PWS 150	Cadmium	202802	C9C310110001	0.5	0.25	mg/L	U	0.5		2009		Avon	1	0.00021
NY	PWS 150	Cadmium	202802	C9D020223001	0.5	0.25	mg/L	U	0.5		2009		Avon	1	0.00021
VT	PWS 150	Cadmium	210501	C9E210297001	0.5	0.25	mg/L	U	0.5		2009		Barre	1	0.00021
AZ	PWS 150	Cadmium	714201	C9H050287001	0.5	0.25	mg/L	U	0.5		2009		Chandler	1	0.00021
VA	PWS 150	Cadmium	312101	C9I250178001	0.5	0.25	mg/L	U	0.5		2009		Chesapeake	1	0.024
OR	PWS 150	Cadmium	714801	C9H150188001	0.5	0.25	mg/L	U	0.5		2009		Clackamas	1	0.00021
NY	PWS 150	Cadmium	200401	C9E210293001	0.5	0.25	mg/L	U	0.5		2009		Cohoes	1	0.00021
KS	PWS 150	Cadmium	619503	C9I240366001	0.5	0.25	mg/L	U	0.5		2009		Dodge City	1	0.024
NE	PWS 150	Cadmium	506501	C9F100111001	0.5	0.25	mg/L	U	0.5		2009		Grand Island	1	0.00021
NY	PWS 150	Cadmium	202801	C9C280117001	0.5	0.25	mg/L	U	0.5		2009		Lackawanna	1	0.00021
OK	PWS 150	Cadmium	612401	C9G230261001	0.5	0.25	mg/L	U	0.5		2009		Oklahoma City	1	0.00021
NC	PWS 150	Cadmium	317101	C9F120357001	0.5	0.25	mg/L	U	0.5		2009		Raleigh	1	0.00021
NC	PWS 150	Cadmium	303102	C9G080306001	0.5	0.25	mg/L	U	0.5		2009		St. Paul	1	0.00021
NY	PWS 150	Cadmium	218701	C9C280112001	0.5	0.25	mg/L	U	0.5		2009		Syracuse	1	0.00021
NM	PWS 150	Cadmium	700801	C7D180253001	0.5	0.25	mg/L	U	0.5		2007		Albuquerque		
NY	PWS 150	Cadmium	202802	C7E230210001	0.5	0.25	mg/L	U	0.5		2007		Avon		
ID	PWS 150	Cadmium	118308	C7F060245001	0.5	0.25	mg/L	U	0.5		2007		Boise		
AZ	PWS 150	Cadmium	714201	C7H170374001	0.5	0.25	mg/L	U	0.5		2007		Chandler		
NC	PWS 150	Cadmium	303101	C7H150248001	0.5	0.25	mg/L	U	0.5		2007		Charlotte		
NY	PWS 150	Cadmium	200401	C7F260261001	0.5	0.25	mg/L	U	0.5		2007		Cohoes		
KS	PWS 150	Cadmium	619503	C7H060166001	0.5	0.25	mg/L	U	0.5		2007		Dodge City		
NE	PWS 150	Cadmium	506501	C7G260212001	0.5	0.25	mg/L	U	0.5		2007		Grand Island		
NC	PWS 150	Cadmium	306401	C7G110239001	0.5	0.25	mg/L	U	0.5		2007		High Point		
OK	PWS 150	Cadmium	612401	C7H160264001	0.5	0.25	mg/L	U	0.5		2007		Oklahoma City		
NE	PWS 150	Cadmium	512701	C7H170363001	0.5	0.25	mg/L	U	0.5		2007		Omaha		
MO	PWS 150	Cadmium	516003	C7G240284001	0.5	0.25	mg/L	U	0.5		2007		St. Charles		
NC	PWS 150	Cadmium	303102	C7G120398001	0.5	0.25	mg/L	U	0.5		2007		St. Paul		
NY	PWS 150	Cadmium	218701	C7F150407001	0.5	0.25	mg/L	U	0.5		2007		Syracuse		
OK	PWS 150	Cadmium	619301	C7H020363001	0.5	0.25	mg/L	U	0.5		2007		Tulsa		
KS	PWS 150	Cadmium	619501	C7G030446001	0.5	0.25	mg/L	U	0.5	37	2007	60	Wichita		
NY	PWS 150	Cadmium	202801	C7F210325001	0.5	0.25	mg/L	U	0.5		2007		Lackawanna		
NC	PWS 150	Cadmium	306401	C7G110239001	0.5	0.25	mg/L	U	0.5		2007		Archdale		
OR	PWS 150	Cadmium	714801	C7I220107001	0.5	0.25	mg/L	U	0.5		2007		Clackamas		
NC	PWS 150	Cadmium	306401	C8E300315001	0.5	0.25	mg/L	U	0.5		2008		Archdale		

State	CLIENT ID	PARAMETER	BRANCH ID	LAB SAMPLE ID	RESULT	Ranked Data	UNITS	QUALIFIER	REPORTING LIMIT	Uth	YEAR	Count	City	DILUTION FACTOR	MDL
NY	PWS 150	Cadmium	202802	C8D300152001	0.5	0.25	mg/L	U	0.5		2008		Avon		
VT	PWS 150	Cadmium	210501	C8G170336001	0.5	0.25	mg/L	U	0.5		2008		Barre		
ID	PWS 150	Cadmium	118308	C8D290257001	0.5	0.25	mg/L	U	0.5		2008		Boise		
VA	PWS 150	Cadmium	312101	C8I100158001	0.5	0.25	mg/L	U	0.5		2008		Chesapeake		
VA	PWS 150	Cadmium	315401	C8I160286001	0.5	0.25	mg/L	U	0.5		2008		Chester		
OR	PWS 150	Cadmium	714801	C8H010298001	0.5	0.25	mg/L	U	0.5		2008		Clackamas		
NY	PWS 150	Cadmium	200401	C8E020248001	0.5	0.25	mg/L	U	0.5		2008		Cohoes		
KS	PWS 150	Cadmium	619503	C8I180216001	0.5	0.25	mg/L	U	0.5		2008		Dodge City		
NE	PWS 150	Cadmium	506501	C8F130243001	0.5	0.25	mg/L	U	0.5		2008		Grand Island		
NY	PWS 150	Cadmium	202801	C8F270351001	0.5	0.25	mg/L	U	0.5		2008		Lackawanna		
NE	PWS 150	Cadmium	512701	C8H010316001	0.5	0.25	mg/L	U	0.5		2008		Omaha		
NC	PWS 150	Cadmium	317101	C8H060186001	0.5	0.25	mg/L	U	0.5		2008		Raleigh		
FL	PWS 150	Cadmium	307902	C8H140244001	0.5	0.25	mg/L	U	0.5		2008		Tallahassee		
OK	PWS 150	Cadmium	619301	C8H130144001	0.5	0.25	mg/L	U	0.5		2008		Tulsa		
VA	PWS 150	Cadmium	315501	C8H220293001	0.5	0.25	mg/L	U	0.5		2008		Vinton		
KS	PWS 150	Cadmium	619501	C8F130240001	0.5	0.25	mg/L	U	0.5		2008		Wichita		
AZ	PWS 150	Cadmium	714201	C8G310254001	0.55	0.55	mg/L		0.5		2008		Chandler		
NY	PWS 150	Cadmium	218701	C8E010345001	0.65	0.65	mg/L		0.5		2008		Syracuse		
KS	PWS 150	Cadmium	619501	C9F060174001	0.83	0.83	mg/L		0.5		2009		Wichita	1	0.00021
ID	PWS 150	Carbon Tetrachloride	118308	C9D240220001	0.2	0.1	mg/L	U	0.2		2009		Boise	4	0.043
NC	PWS 150	Carbon Tetrachloride	303101	C8I230211001	0.25	0.125	mg/L	U	0.25		2008		Charlotte	1	0.07
OK	PWS 150	Carbon Tetrachloride	612401	C8I190324001	0.25	0.125	mg/L	U	0.25		2008		Oklahoma City	1	0.07
NC	PWS 150	Carbon Tetrachloride	306401	C9D160222001	0.25	0.125	mg/L	U	0.25		2009		Archdale	1	0.011
NY	PWS 150	Carbon Tetrachloride	202802	C9C310110001	0.25	0.125	mg/L	U	0.25		2009		Avon	1	0.07
NY	PWS 150	Carbon Tetrachloride	202802	C9D020223001	0.25	0.125	mg/L	U	0.25		2009		Avon	1	0.07
VT	PWS 150	Carbon Tetrachloride	210501	C9E210297001	0.25	0.125	mg/L	U	0.25		2009		Barre	1	0.07
AZ	PWS 150	Carbon Tetrachloride	714201	C9H050287001	0.25	0.125	mg/L	U	0.25		2009		Chandler	1	0.07
VA	PWS 150	Carbon Tetrachloride	312101	C9I250178001	0.25	0.125	mg/L	U	0.25		2009		Chesapeake	1	0.07
OR	PWS 150	Carbon Tetrachloride	714801	C9H150188001	0.25	0.125	mg/L	U	0.25		2009		Clackamas	1	0.07
NY	PWS 150	Carbon Tetrachloride	200401	C9E210293001	0.25	0.125	mg/L	U	0.25		2009		Cohoes	1	0.07
KS	PWS 150	Carbon Tetrachloride	619503	C9I240366001	0.25	0.125	mg/L	U	0.25		2009		Dodge City	1	0.07
NE	PWS 150	Carbon Tetrachloride	506501	C9F100111001	0.25	0.125	mg/L	U	0.25		2009		Grand Island	1	0.011
NY	PWS 150	Carbon Tetrachloride	202801	C9C280117001	0.25	0.125	mg/L	U	0.25		2009		Lackawanna	1	0.07
OK	PWS 150	Carbon Tetrachloride	612401	C9G230261001	0.25	0.125	mg/L	U	0.25		2009		Oklahoma City	1	0.07
NC	PWS 150	Carbon Tetrachloride	317101	C9F120357001	0.25	0.125	mg/L	U	0.25		2009		Raleigh	1	0.07
NC	PWS 150	Carbon Tetrachloride	303102	C9G080306001	0.25	0.125	mg/L	U	0.25		2009		St. Paul	1	0.011
NY	PWS 150	Carbon Tetrachloride	218701	C9C280112001	0.25	0.125	mg/L	U	0.25		2009		Syracuse	1	0.07
KS	PWS 150	Carbon Tetrachloride	619501	C9F060174001	0.25	0.125	mg/L	U	0.25		2009		Wichita	1	0.011
NM	PWS 150	Carbon Tetrachloride	700801	C7D180253001	0.25	0.125	mg/L	U	0.25		2007		Albuquerque		
NY	PWS 150	Carbon Tetrachloride	202802	C7E230210001	0.25	0.125	mg/L	U	0.25		2007		Avon		
ID	PWS 150	Carbon Tetrachloride	118308	C7F060245001	0.25	0.125	mg/L	U	0.25		2007		Boise		
AZ	PWS 150	Carbon Tetrachloride	714201	C7H170374001	0.25	0.125	mg/L	U	0.25		2007		Chandler		
NC	PWS 150	Carbon Tetrachloride	303101	C7H150248001	0.25	0.125	mg/L	U	0.25		2007		Charlotte		
NY	PWS 150	Carbon Tetrachloride	200401	C7F260261001	0.25	0.125	mg/L	U	0.25		2007		Cohoes		
KS	PWS 150	Carbon Tetrachloride	619503	C7H060166001	0.25	0.125	mg/L	U	0.25		2007		Dodge City		
NE	PWS 150	Carbon Tetrachloride	506501	C7G260212001	0.25	0.125	mg/L	U	0.25		2007		Grand Island		
NC	PWS 150	Carbon Tetrachloride	306401	C7G110239001	0.25	0.125	mg/L	U	0.25		2007		High Point		
OK	PWS 150	Carbon Tetrachloride	612401	C7H160264001	0.25	0.125	mg/L	U	0.25		2007		Oklahoma City		
NE	PWS 150	Carbon Tetrachloride	512701	C7H170363001	0.25	0.125	mg/L	U	0.25		2007		Omaha		
MO	PWS 150	Carbon Tetrachloride	516003	C7G240284001	0.25	0.125	mg/L	U	0.25		2007		St. Charles		
NC	PWS 150	Carbon Tetrachloride	303102	C7G120398001	0.25	0.125	mg/L	U	0.25		2007		St. Paul		
NY	PWS 150	Carbon Tetrachloride	218701	C7F150407001	0.25	0.125	mg/L	U	0.25		2007		Syracuse		
OK	PWS 150	Carbon Tetrachloride	619301	C7H020363001	0.25	0.125	mg/L	U	0.25		2007		Tulsa		
KS	PWS 150	Carbon Tetrachloride	619501	C7G030446001	0.25	0.125	mg/L	U	0.25		2007		Wichita		
NY	PWS 150	Carbon Tetrachloride	202801	C7F210325001	0.25	0.125	mg/L	U	0.25		2007		Lackawanna		
NC	PWS 150	Carbon Tetrachloride	306401	C7G110239001	0.25	0.125	mg/L	U	0.25	37	2007	60	Archdale		
OR	PWS 150	Carbon Tetrachloride	714801	C7I220107001	0.25	0.125	mg/L	U	0.25		2007		Clackamas		
NC	PWS 150	Carbon Tetrachloride	306401	C8E300315001	0.25	0.125	mg/L	U	0.25		2008		Archdale		
NY	PWS 150	Carbon Tetrachloride	202802	C8D300152001	0.25	0.125	mg/L	U	0.25		2008		Avon		
VT	PWS 150	Carbon Tetrachloride	210501	C8G170336001	0.25	0.125	mg/L	U	0.25		2008		Barre		
ID	PWS 150	Carbon Tetrachloride	118308	C8D290257001	0.25	0.125	mg/L	U	0.25		2008		Boise		
AZ	PWS 150	Carbon Tetrachloride	714201	C8G310254001	0.25	0.125	mg/L	U	0.25		2008		Chandler		
VA	PWS 150	Carbon Tetrachloride	312101	C8I100158001	0.25	0.125	mg/L	U	0.25		2008		Chesapeake		
VA	PWS 150	Carbon Tetrachloride	315401	C8I160286001	0.25	0.125	mg/L	U	0.25		2008		Chester		
OR	PWS 150	Carbon Tetrachloride	714801	C8H010298001	0.25	0.125	mg/L	U	0.25		2008		Clackamas		
NY	PWS 150	Carbon Tetrachloride	200401	C8E020248001	0.25	0.125	mg/L	U	0.25		2008		Cohoes		

State	CLIENT ID	PARAMETER	BRANCH ID	LAB SAMPLE ID	RESULT	Ranked Data	UNITS	QUALIFIER	REPORTING LIMIT	Uth	YEAR	Count	City	DILUTION FACTOR	MDL
NE	PWS 150	Carbon Tetrachloride	506501	C8F130243001	0.25	0.125	mg/L	U	0.25		2008		Grand Island		
NY	PWS 150	Carbon Tetrachloride	202801	C8F270351001	0.25	0.125	mg/L	U	0.25		2008		Lackawanna		
NE	PWS 150	Carbon Tetrachloride	512701	C8H010316001	0.25	0.125	mg/L	U	0.25		2008		Omaha		
NC	PWS 150	Carbon Tetrachloride	317101	C8H060186001	0.25	0.125	mg/L	U	0.25		2008		Raleigh		
NY	PWS 150	Carbon Tetrachloride	218701	C8E010345001	0.25	0.125	mg/L	U	0.25		2008		Syracuse		
FL	PWS 150	Carbon Tetrachloride	307902	C8H140244001	0.25	0.125	mg/L	U	0.25		2008		Tallahassee		
OK	PWS 150	Carbon Tetrachloride	619301	C8H130144001	0.25	0.125	mg/L	U	0.25		2008		Tulsa		
VA	PWS 150	Carbon Tetrachloride	315501	C8H220293001	0.25	0.125	mg/L	U	0.25		2008		Vinton		
KS	PWS 150	Carbon Tetrachloride	619501	C8F130240001	0.25	0.125	mg/L	U	0.25		2008		Wichita		
NC	PWS 150	Carbon Tetrachloride	303102	C8J020304001	0.5	0.25	mg/L	U	0.5		2008		St. Paul	2	0.14
KS	PWS 150	Carbon Tetrachloride	619503	C8I180216001	0.5	0.25	mg/L	U	0.5		2008		Dodge City		
BC	PWS 150	Carbon Tetrachloride	818306	AR2008 8-183-06-3	100	50	mg/L	U	100		2008		Langley		
AB	PWS 150	Carbon Tetrachloride	819401	L690481-6	100	50	mg/L	U	100		2008		Nisku		
ID	PWS 150	Chlorobenzene	118308	C9D240220001	0.2	0.1	mg/L	U	0.2		2009		Boise	4	0.021
NC	PWS 150	Chlorobenzene	303101	C8I230211001	0.25	0.125	mg/L	U	0.25		2008		Charlotte	1	0.066
OK	PWS 150	Chlorobenzene	612401	C8I190324001	0.25	0.125	mg/L	U	0.25		2008		Oklahoma City	1	0.066
NC	PWS 150	Chlorobenzene	306401	C9D160222001	0.25	0.125	mg/L	U	0.25		2009		Archdale	1	0.0053
NY	PWS 150	Chlorobenzene	202802	C9C310110001	0.25	0.125	mg/L	U	0.25		2009		Avon	1	0.066
NY	PWS 150	Chlorobenzene	202802	C9D020223001	0.25	0.125	mg/L	U	0.25		2009		Avon	1	0.066
VT	PWS 150	Chlorobenzene	210501	C9E210297001	0.25	0.125	mg/L	U	0.25		2009		Barre	1	0.066
AZ	PWS 150	Chlorobenzene	714201	C9H050287001	0.25	0.125	mg/L	U	0.25		2009		Chandler	1	0.066
VA	PWS 150	Chlorobenzene	312101	C9I250178001	0.25	0.125	mg/L	U	0.25		2009		Chesapeake	1	0.066
OR	PWS 150	Chlorobenzene	714801	C9H150188001	0.25	0.125	mg/L	U	0.25		2009		Clackamas	1	0.066
NY	PWS 150	Chlorobenzene	200401	C9E210293001	0.25	0.125	mg/L	U	0.25		2009		Cohoes	1	0.066
KS	PWS 150	Chlorobenzene	619503	C9I240366001	0.25	0.125	mg/L	U	0.25		2009		Dodge City	1	0.066
NE	PWS 150	Chlorobenzene	506501	C9F100111001	0.25	0.125	mg/L	U	0.25		2009		Grand Island	1	0.0053
NY	PWS 150	Chlorobenzene	202801	C9C280117001	0.25	0.125	mg/L	U	0.25		2009		Lackawanna	1	0.066
OK	PWS 150	Chlorobenzene	612401	C9G230261001	0.25	0.125	mg/L	U	0.25		2009		Oklahoma City	1	0.066
NC	PWS 150	Chlorobenzene	317101	C9F120357001	0.25	0.125	mg/L	U	0.25		2009		Raleigh	1	0.066
NC	PWS 150	Chlorobenzene	303102	C9G080306001	0.25	0.125	mg/L	U	0.25		2009		St. Paul	1	0.0053
NY	PWS 150	Chlorobenzene	218701	C9C280112001	0.25	0.125	mg/L	U	0.25		2009		Syracuse	1	0.066
KS	PWS 150	Chlorobenzene	619501	C9F060174001	0.25	0.125	mg/L	U	0.25		2009		Wichita	1	0.0053
NM	PWS 150	Chlorobenzene	700801	C7D180253001	0.25	0.125	mg/L	U	0.25		2007		Albuquerque		
NY	PWS 150	Chlorobenzene	202802	C7E230210001	0.25	0.125	mg/L	U	0.25		2007		Avon		
ID	PWS 150	Chlorobenzene	118308	C7F060245001	0.25	0.125	mg/L	U	0.25		2007		Boise		
AZ	PWS 150	Chlorobenzene	714201	C7H170374001	0.25	0.125	mg/L	U	0.25		2007		Chandler		
NC	PWS 150	Chlorobenzene	303101	C7H150248001	0.25	0.125	mg/L	U	0.25		2007		Charlotte		
NY	PWS 150	Chlorobenzene	200401	C7F260261001	0.25	0.125	mg/L	U	0.25		2007		Cohoes		
KS	PWS 150	Chlorobenzene	619503	C7H060166001	0.25	0.125	mg/L	U	0.25		2007		Dodge City		
NE	PWS 150	Chlorobenzene	506501	C7G260212001	0.25	0.125	mg/L	U	0.25		2007		Grand Island		
NC	PWS 150	Chlorobenzene	306401	C7G110239001	0.25	0.125	mg/L	U	0.25		2007		High Point		
OK	PWS 150	Chlorobenzene	612401	C7H160264001	0.25	0.125	mg/L	U	0.25		2007		Oklahoma City		
NE	PWS 150	Chlorobenzene	512701	C7H170363001	0.25	0.125	mg/L	U	0.25		2007		Omaha		
MO	PWS 150	Chlorobenzene	516003	C7G240284001	0.25	0.125	mg/L	U	0.25		2007		St. Charles		
NC	PWS 150	Chlorobenzene	303102	C7G120398001	0.25	0.125	mg/L	U	0.25		2007		St. Paul		
NY	PWS 150	Chlorobenzene	218701	C7F150407001	0.25	0.125	mg/L	U	0.25		2007		Syracuse		
OK	PWS 150	Chlorobenzene	619301	C7H020363001	0.25	0.125	mg/L	U	0.25		2007		Tulsa		
KS	PWS 150	Chlorobenzene	619501	C7G030446001	0.25	0.125	mg/L	U	0.25		2007		Wichita		
NY	PWS 150	Chlorobenzene	202801	C7F210325001	0.25	0.125	mg/L	U	0.25		2007		Lackawanna		
NC	PWS 150	Chlorobenzene	306401	C7G110239001	0.25	0.125	mg/L	U	0.25	37	2007	60	Archdale		
OR	PWS 150	Chlorobenzene	714801	C7I220107001	0.25	0.125	mg/L	U	0.25		2007		Clackamas		
NC	PWS 150	Chlorobenzene	306401	C8E300315001	0.25	0.125	mg/L	U	0.25		2008		Archdale		
NY	PWS 150	Chlorobenzene	202802	C8D300152001	0.25	0.125	mg/L	U	0.25		2008		Avon		
VT	PWS 150	Chlorobenzene	210501	C8G170336001	0.25	0.125	mg/L	U	0.25		2008		Barre		
ID	PWS 150	Chlorobenzene	118308	C8D290257001	0.25	0.125	mg/L	U	0.25		2008		Boise		
AZ	PWS 150	Chlorobenzene	714201	C8G310254001	0.25	0.125	mg/L	U	0.25		2008		Chandler		
VA	PWS 150	Chlorobenzene	312101	C8I100158001	0.25	0.125	mg/L	U	0.25		2008		Chesapeake		
VA	PWS 150	Chlorobenzene	315401	C8I160286001	0.25	0.125	mg/L	U	0.25		2008		Chester		
OR	PWS 150	Chlorobenzene	714801	C8H010298001	0.25	0.125	mg/L	U	0.25		2008		Clackamas		
NY	PWS 150	Chlorobenzene	200401	C8E020248001	0.25	0.125	mg/L	U	0.25		2008		Cohoes		
NE	PWS 150	Chlorobenzene	506501	C8F130243001	0.25	0.125	mg/L	U	0.25		2008		Grand Island		
NY	PWS 150	Chlorobenzene	202801	C8F270351001	0.25	0.125	mg/L	U	0.25		2008		Lackawanna		
NE	PWS 150	Chlorobenzene	512701	C8H010316001	0.25	0.125	mg/L	U	0.25		2008		Omaha		
NC	PWS 150	Chlorobenzene	317101	C8H060186001	0.25	0.125	mg/L	U	0.25		2008		Raleigh		
NY	PWS 150	Chlorobenzene	218701	C8E010345001	0.25	0.125	mg/L	U	0.25		2008		Syracuse		
FL	PWS 150	Chlorobenzene	307902	C8H140244001	0.25	0.125	mg/L	U	0.25		2008		Tallahassee		

State	CLIENT ID	PARAMETER	BRANCH ID	LAB SAMPLE ID	RESULT	Ranked Data	UNITS	QUALIFIER	REPORTING LIMIT	Uth	YEAR	Count	City	DILUTION FACTOR	MDL
OK	PWS 150	Chlorobenzene	619301	C8H130144001	0.25	0.125	mg/L	U	0.25		2008		Tulsa		
VA	PWS 150	Chlorobenzene	315501	C8H220293001	0.25	0.125	mg/L	U	0.25		2008		Vinton		
KS	PWS 150	Chlorobenzene	619501	C8F130240001	0.25	0.125	mg/L	U	0.25		2008		Wichita		
NC	PWS 150	Chlorobenzene	303102	C8J020304001	0.5	0.25	mg/L	U	0.5		2008		St. Paul	2	0.13
KS	PWS 150	Chlorobenzene	619503	C8I180216001	0.5	0.25	mg/L	U	0.5		2008		Dodge City		
BC	PWS 150	Chlorobenzene	818306	AR2008 8-183-06-3	100	50	mg/L	U	100		2008		Langley		
AB	PWS 150	Chlorobenzene	819401	L690481-6	100	50	mg/L	U	100		2008		Nisku		
ID	PWS 150	Chloroform	118308	C9D240220001	0.2	0.1	mg/L	U	0.2		2009		Boise	4	0.04
NC	PWS 150	Chloroform	303101	C8I230211001	1	0.5	mg/L	U	1		2008		Charlotte	1	0.14
OK	PWS 150	Chloroform	612401	C8I190324001	1	0.5	mg/L	U	1		2008		Oklahoma City	1	0.14
NC	PWS 150	Chloroform	306401	C9D160222001	1	0.5	mg/L	U	1		2009		Archdale	1	0.01
NY	PWS 150	Chloroform	202802	C9C310110001	1	0.5	mg/L	U	1		2009		Avon	1	0.14
NY	PWS 150	Chloroform	202802	C9D020223001	1	0.5	mg/L	U	1		2009		Avon	1	0.14
VT	PWS 150	Chloroform	210501	C9E210297001	1	0.5	mg/L	U	1		2009		Barre	1	0.14
AZ	PWS 150	Chloroform	714201	C9H050287001	1	0.5	mg/L	U	1		2009		Chandler	1	0.14
VA	PWS 150	Chloroform	312101	C9I250178001	1	0.5	mg/L	U	1		2009		Chesapeake	1	0.14
OR	PWS 150	Chloroform	714801	C9H150188001	1	0.5	mg/L	U	1		2009		Clackamas	1	0.14
NY	PWS 150	Chloroform	200401	C9E210293001	1	0.5	mg/L	U	1		2009		Cohoes	1	0.14
KS	PWS 150	Chloroform	619503	C9I240366001	1	0.5	mg/L	U	1		2009		Dodge City	1	0.14
NE	PWS 150	Chloroform	506501	C9F100111001	1	0.5	mg/L	U	1		2009		Grand Island	1	0.01
NY	PWS 150	Chloroform	202801	C9C280117001	1	0.5	mg/L	U	1		2009		Lackawanna	1	0.14
OK	PWS 150	Chloroform	612401	C9G230261001	1	0.5	mg/L	U	1		2009		Oklahoma City	1	0.14
NC	PWS 150	Chloroform	317101	C9F120357001	1	0.5	mg/L	U	1		2009		Raleigh	1	0.14
NC	PWS 150	Chloroform	303102	C9G080306001	1	0.5	mg/L	U	1		2009		St. Paul	1	0.01
NY	PWS 150	Chloroform	218701	C9C280112001	1	0.5	mg/L	U	1		2009		Syracuse	1	0.14
KS	PWS 150	Chloroform	619501	C9F060174001	1	0.5	mg/L	U	1		2009		Wichita	1	0.01
NM	PWS 150	Chloroform	700801	C7D180253001	1	0.5	mg/L	U	1		2007		Albuquerque		
NY	PWS 150	Chloroform	202802	C7E230210001	1	0.5	mg/L	U	1		2007		Avon		
ID	PWS 150	Chloroform	118308	C7F060245001	1	0.5	mg/L	U	1		2007		Boise		
AZ	PWS 150	Chloroform	714201	C7H170374001	1	0.5	mg/L	U	1		2007		Chandler		
NC	PWS 150	Chloroform	303101	C7H150248001	1	0.5	mg/L	U	1		2007		Charlotte		
NY	PWS 150	Chloroform	200401	C7F260261001	1	0.5	mg/L	U	1		2007		Cohoes		
KS	PWS 150	Chloroform	619503	C7H060166001	1	0.5	mg/L	U	1		2007		Dodge City		
NE	PWS 150	Chloroform	506501	C7G260212001	1	0.5	mg/L	U	1		2007		Grand Island		
NC	PWS 150	Chloroform	306401	C7G110239001	1	0.5	mg/L	U	1		2007		High Point		
OK	PWS 150	Chloroform	612401	C7H160264001	1	0.5	mg/L	U	1		2007		Oklahoma City		
NE	PWS 150	Chloroform	512701	C7H170363001	1	0.5	mg/L	U	1		2007		Omaha		
MO	PWS 150	Chloroform	516003	C7G240284001	1	0.5	mg/L	U	1		2007		St. Charles		
NC	PWS 150	Chloroform	303102	C7G120398001	1	0.5	mg/L	U	1		2007		St. Paul		
NY	PWS 150	Chloroform	218701	C7F150407001	1	0.5	mg/L	U	1		2007		Syracuse		
OK	PWS 150	Chloroform	619301	C7H020363001	1	0.5	mg/L	U	1		2007		Tulsa		
KS	PWS 150	Chloroform	619501	C7G030446001	1	0.5	mg/L	U	1		2007		Wichita		
NY	PWS 150	Chloroform	202801	C7F210325001	1	0.5	mg/L	U	1		2007		Lackawanna		
NC	PWS 150	Chloroform	306401	C7G110239001	1	0.5	mg/L	U	1	37	2007	60	Archdale		
OR	PWS 150	Chloroform	714801	C7I220107001	1	0.5	mg/L	U	1		2007		Clackamas		
NC	PWS 150	Chloroform	306401	C8E300315001	1	0.5	mg/L	U	1		2008		Archdale		
NY	PWS 150	Chloroform	202802	C8D300152001	1	0.5	mg/L	U	1		2008		Avon		
VT	PWS 150	Chloroform	210501	C8G170336001	1	0.5	mg/L	U	1		2008		Barre		
ID	PWS 150	Chloroform	118308	C8D290257001	1	0.5	mg/L	U	1		2008		Boise		
AZ	PWS 150	Chloroform	714201	C8G310254001	1	0.5	mg/L	U	1		2008		Chandler		
VA	PWS 150	Chloroform	312101	C8I100158001	1	0.5	mg/L	U	1		2008		Chesapeake		
VA	PWS 150	Chloroform	315401	C8I160286001	1	0.5	mg/L	U	1		2008		Chester		
OR	PWS 150	Chloroform	714801	C8H010298001	1	0.5	mg/L	U	1		2008		Clackamas		
NY	PWS 150	Chloroform	200401	C8E020248001	1	0.5	mg/L	U	1		2008		Cohoes		
NE	PWS 150	Chloroform	506501	C8F130243001	1	0.5	mg/L	U	1		2008		Grand Island		
NY	PWS 150	Chloroform	202801	C8F270351001	1	0.5	mg/L	U	1		2008		Lackawanna		
NE	PWS 150	Chloroform	512701	C8H010316001	1	0.5	mg/L	U	1		2008		Omaha		
NC	PWS 150	Chloroform	317101	C8H060186001	1	0.5	mg/L	U	1		2008		Raleigh		
NY	PWS 150	Chloroform	218701	C8E010345001	1	0.5	mg/L	U	1		2008		Syracuse		
FL	PWS 150	Chloroform	307902	C8H140244001	1	0.5	mg/L	U	1		2008		Tallahassee		
OK	PWS 150	Chloroform	619301	C8H130144001	1	0.5	mg/L	U	1		2008		Tulsa		
VA	PWS 150	Chloroform	315501	C8H220293001	1	0.5	mg/L	U	1		2008		Vinton		
KS	PWS 150	Chloroform	619501	C8F130240001	1	0.5	mg/L	U	1		2008		Wichita		
NC	PWS 150	Chloroform	303102	C8J020304001	2	1	mg/L	U	2		2008		St. Paul	2	0.29
KS	PWS 150	Chloroform	619503	C8I180216001	2	1	mg/L	U	2		2008		Dodge City		
BC	PWS 150	Chloroform	818306	AR2008 8-183-06-3	100	50	mg/L	U	100		2008		Langley		

State	CLIENT ID	PARAMETER	BRANCH ID	LAB SAMPLE ID	RESULT	Ranked Data	UNITS	QUALIFIER	REPORTING LIMIT	Uth	YEAR	Count	City	DILUTION FACTOR	MDL
AB	PWS 150	Chloroform	819401	L690481-6	100	50	mg/L	U	100		2008		Nisku		
ID	PWS 150	Chromium	118308	C9D240220001	0.05	0.025	mg/L	U	0.05		2009		Boise	1	0.00057
NC	PWS 150	Chromium	303101	C8I230211001	0.5	0.25	mg/L	U	0.5		2008		Charlotte	1	0.12
NC	PWS 150	Chromium	303102	C8J020304001	0.5	0.25	mg/L	U	0.5		2008		St. Paul	1	0.12
OK	PWS 150	Chromium	612401	C8I190324001	0.5	0.25	mg/L	U	0.5		2008		Oklahoma City	1	0.12
NC	PWS 150	Chromium	306401	C9D160222001	0.5	0.25	mg/L	U	0.5		2009		Archdale	1	0.0011
NY	PWS 150	Chromium	202802	C9C310110001	0.5	0.25	mg/L	U	0.5		2009		Avon	1	0.0011
NY	PWS 150	Chromium	202802	C9D020223001	0.5	0.25	mg/L	U	0.5		2009		Avon	1	0.0011
VT	PWS 150	Chromium	210501	C9E210297001	0.5	0.25	mg/L	U	0.5		2009		Barre	1	0.0011
AZ	PWS 150	Chromium	714201	C9H050287001	0.5	0.25	mg/L	U	0.5		2009		Chandler	1	0.0011
VA	PWS 150	Chromium	312101	C9I250178001	0.5	0.25	mg/L	U	0.5		2009		Chesapeake	1	0.085
OR	PWS 150	Chromium	714801	C9H150188001	0.5	0.25	mg/L	U	0.5		2009		Clackamas	1	0.0011
NY	PWS 150	Chromium	200401	C9E210293001	0.5	0.25	mg/L	U	0.5		2009		Cohoes	1	0.0011
KS	PWS 150	Chromium	619503	C9I240366001	0.5	0.25	mg/L	U	0.5		2009		Dodge City	1	0.085
NE	PWS 150	Chromium	506501	C9F100111001	0.5	0.25	mg/L	U	0.5		2009		Grand Island	1	0.0011
NY	PWS 150	Chromium	202801	C9C280117001	0.5	0.25	mg/L	U	0.5		2009		Lackawanna	1	0.0011
OK	PWS 150	Chromium	612401	C9G230261001	0.5	0.25	mg/L	U	0.5		2009		Oklahoma City	1	0.0011
NC	PWS 150	Chromium	317101	C9F120357001	0.5	0.25	mg/L	U	0.5		2009		Raleigh	1	0.0011
NC	PWS 150	Chromium	303102	C9G080306001	0.5	0.25	mg/L	U	0.5		2009		St. Paul	1	0.0011
NY	PWS 150	Chromium	218701	C9C280112001	0.5	0.25	mg/L	U	0.5		2009		Syracuse	1	0.0011
KS	PWS 150	Chromium	619501	C9F060174001	0.5	0.25	mg/L	U	0.5		2009		Wichita	1	0.0011
NM	PWS 150	Chromium	700801	C7D180253001	0.5	0.25	mg/L	U	0.5		2007		Albuquerque		
NY	PWS 150	Chromium	202802	C7E230210001	0.5	0.25	mg/L	U	0.5		2007		Avon		
ID	PWS 150	Chromium	118308	C7F060245001	0.5	0.25	mg/L	U	0.5		2007		Boise		
AZ	PWS 150	Chromium	714201	C7H170374001	0.5	0.25	mg/L	U	0.5		2007		Chandler		
NC	PWS 150	Chromium	303101	C7H150248001	0.5	0.25	mg/L	U	0.5		2007		Charlotte		
NY	PWS 150	Chromium	200401	C7F260261001	0.5	0.25	mg/L	U	0.5		2007		Cohoes		
KS	PWS 150	Chromium	619503	C7H060166001	0.5	0.25	mg/L	U	0.5		2007		Dodge City		
NE	PWS 150	Chromium	506501	C7G260212001	0.5	0.25	mg/L	U	0.5		2007		Grand Island		
NC	PWS 150	Chromium	306401	C7G110239001	0.5	0.25	mg/L	U	0.5		2007		High Point		
OK	PWS 150	Chromium	612401	C7H160264001	0.5	0.25	mg/L	U	0.5		2007		Oklahoma City		
NE	PWS 150	Chromium	512701	C7H170363001	0.5	0.25	mg/L	U	0.5		2007		Omaha		
MO	PWS 150	Chromium	516003	C7G240284001	0.5	0.25	mg/L	U	0.5		2007		St. Charles		
NC	PWS 150	Chromium	303102	C7G120398001	0.5	0.25	mg/L	U	0.5		2007		St. Paul		
NY	PWS 150	Chromium	218701	C7F150407001	0.5	0.25	mg/L	U	0.5		2007		Syracuse		
OK	PWS 150	Chromium	619301	C7H020363001	0.5	0.25	mg/L	U	0.5		2007		Tulsa		
KS	PWS 150	Chromium	619501	C7G030446001	0.5	0.25	mg/L	U	0.5		2007		Wichita		
NY	PWS 150	Chromium	202801	C7F210325001	0.5	0.25	mg/L	U	0.5	37	2007	60	Lackawanna		
NC	PWS 150	Chromium	306401	C7G110239001	0.5	0.25	mg/L	U	0.5		2007		Archdale		
OR	PWS 150	Chromium	714801	C7I220107001	0.5	0.25	mg/L	U	0.5		2007		Clackamas		
NC	PWS 150	Chromium	306401	C8E300315001	0.5	0.25	mg/L	U	0.5		2008		Archdale		
NY	PWS 150	Chromium	202802	C8D300152001	0.5	0.25	mg/L	U	0.5		2008		Avon		
VT	PWS 150	Chromium	210501	C8G170336001	0.5	0.25	mg/L	U	0.5		2008		Barre		
ID	PWS 150	Chromium	118308	C8D290257001	0.5	0.25	mg/L	U	0.5		2008		Boise		
AZ	PWS 150	Chromium	714201	C8G310254001	0.5	0.25	mg/L	U	0.5		2008		Chandler		
VA	PWS 150	Chromium	312101	C8I100158001	0.5	0.25	mg/L	U	0.5		2008		Chesapeake		
VA	PWS 150	Chromium	315401	C8I160286001	0.5	0.25	mg/L	U	0.5		2008		Chester		
OR	PWS 150	Chromium	714801	C8H010298001	0.5	0.25	mg/L	U	0.5		2008		Clackamas		
NY	PWS 150	Chromium	200401	C8E020248001	0.5	0.25	mg/L	U	0.5		2008		Cohoes		
KS	PWS 150	Chromium	619503	C8I180216001	0.5	0.25	mg/L	U	0.5		2008		Dodge City		
NE	PWS 150	Chromium	506501	C8F130243001	0.5	0.25	mg/L	U	0.5		2008		Grand Island		
NY	PWS 150	Chromium	202801	C8F270351001	0.5	0.25	mg/L	U	0.5		2008		Lackawanna		
NE	PWS 150	Chromium	512701	C8H010316001	0.5	0.25	mg/L	U	0.5		2008		Omaha		
NC	PWS 150	Chromium	317101	C8H060186001	0.5	0.25	mg/L	U	0.5		2008		Raleigh		
FL	PWS 150	Chromium	307902	C8H140244001	0.5	0.25	mg/L	U	0.5		2008		Tallahassee		
OK	PWS 150	Chromium	619301	C8H130144001	0.5	0.25	mg/L	U	0.5		2008		Tulsa		
VA	PWS 150	Chromium	315501	C8H220293001	0.5	0.25	mg/L	U	0.5		2008		Vinton		
KS	PWS 150	Chromium	619501	C8F130240001	0.5	0.25	mg/L	U	0.5		2008		Wichita		
BC	PWS 150	Chromium	818306	AR2008 8-183-06-3	0.5	0.25	mg/L	U	0.5		2008		Langley		
AB	PWS 150	Chromium	819401	L690481-6	0.5	0.25	mg/L	U	0.5		2008		Nisku		
NY	PWS 150	Chromium	218701	C8E010345001	0.79	0.79	mg/L		0.5		2008		Syracuse		
AZ	PWS 150	Flash Point	714201	C7H170374001	75	75	deg F				2007		Chandler		
NY	PWS 150	Flash Point	202801	C7F210325001	97.2	97.2	deg F				2007		Lackawanna		
OR	PWS 150	Flash Point	714801	C8H010298001	109	109	deg F				2008		Clackamas		
VA	PWS 150	Flash Point	312101	C8I100158001	125	125	deg F				2008		Chesapeake		
KS	PWS 150	Flash Point	619503	C9I240366001	125	125	deg F				2009		Dodge City	1	

State	CLIENT ID	PARAMETER	BRANCH ID	LAB SAMPLE ID	RESULT	Ranked Data	UNITS	QUALIFIER	REPORTING LIMIT	Uth	YEAR	Count	City	DILUTION FACTOR	MDL
ID	PWS 150	Flash Point	118308	C7F060245001	128	128	deg F				2007		Boise		
OR	PWS 150	Flash Point	714801	C9H150188001	129	129	deg F				2009		Clackamas	1	
KS	PWS 150	Flash Point	619503	C7H060166001	130	130	deg F				2007		Dodge City		
NE	PWS 150	Flash Point	506501	C7G260212001	135	135	deg F				2007		Grand Island		
NE	PWS 150	Flash Point	512701	C7H170363001	135	135	deg F				2007		Omaha		
ID	PWS 150	Flash Point	118308	C9D240220001	141	141	deg F		--		2009		Boise	1	--
NY	PWS 150	Flash Point	202802	C7E230210001	143	143	deg F				2007		Avon		
NY	PWS 150	Flash Point	200401	C7F260261001	143	143	deg F				2007		Cohoes		
NC	PWS 150	Flash Point	317101	C8H060186001	143	143	deg F				2008		Raleigh		
VA	PWS 150	Flash Point	312101	C9I250178001	144	144	deg F				2009		Chesapeake	1	
VT	PWS 150	Flash Point	210501	C8G170336001	145	145	deg F				2008		Barre		
ID	PWS 150	Flash Point	118308	C8D290257001	145	145	deg F				2008		Boise		
NC	PWS 150	Flash Point	303101	C7H150248001	146	146	deg F				2007		Charlotte		
OK	PWS 150	Flash Point	619301	C7H020363001	147	147	deg F				2007		Tulsa		
OK	PWS 150	Flash Point	612401	C7H160264001	149	149	deg F				2007		Oklahoma City		
NE	PWS 150	Flash Point	506501	C8F130243001	149	149	deg F				2008		Grand Island		
NE	PWS 150	Flash Point	512701	C8H010316001	149	149	deg F				2008		Omaha		
AB	PWS 150	Flash Point	819401	L690481-6	149	149	deg F				2008		Nisku		
NY	PWS 150	Flash Point	200401	C8E020248001	150	150	deg F			37	2008	60	Cohoes		
VT	PWS 150	Flash Point	210501	C9E210297001	151	151	deg F				2009		Barre	1	
NM	PWS 150	Flash Point	700801	C7D180253001	152	152	deg F				2007		Albuquerque		
MO	PWS 150	Flash Point	516003	C7G240284001	153	153	deg F				2007		St. Charles		
NY	PWS 150	Flash Point	218701	C7F150407001	153	153	deg F				2007		Syracuse		
NY	PWS 150	Flash Point	202801	C8F270351001	153	153	deg F				2008		Lackawanna		
NY	PWS 150	Flash Point	218701	C8E010345001	153	153	deg F				2008		Syracuse		
BC	PWS 150	Flash Point	818306	AR2008 8-183-06-3	153	153	deg F				2008		Langley		
KS	PWS 150	Flash Point	619501	C7G030446001	154	154	deg F				2007		Wichita		
NY	PWS 150	Flash Point	202802	C8D300152001	155	155	deg F				2008		Avon		
AZ	PWS 150	Flash Point	714201	C9H050287001	155	155	deg F				2009		Chandler	1	
NE	PWS 150	Flash Point	506501	C9F100111001	155	155	deg F				2009		Grand Island	1	
OR	PWS 150	Flash Point	714801	C7I220107001	156	156	deg F				2007		Clackamas		
NC	PWS 150	Flash Point	303102	C8J020304001	156	156	deg F				2008		St. Paul	1	
OK	PWS 150	Flash Point	612401	C9G230261001	156	156	deg F				2009		Oklahoma City	1	
NC	PWS 150	Flash Point	303102	C7G120398001	157	157	deg F				2007		St. Paul		
AZ	PWS 150	Flash Point	714201	C8G310254001	157	157	deg F				2008		Chandler		
KS	PWS 150	Flash Point	619503	C8I180216001	157	157	deg F				2008		Dodge City		
KS	PWS 150	Flash Point	619501	C8F130240001	157	157	deg F				2008		Wichita		
NC	PWS 150	Flash Point	306401	C9D160222001	157	157	deg F				2009		Archdale	1	
NC	PWS 150	Flash Point	306401	C7G110239001	159	159	deg F				2007		High Point		
NC	PWS 150	Flash Point	306401	C7G110239001	159	159	deg F				2007		Archdale		
VA	PWS 150	Flash Point	315501	C8H220293001	159	159	deg F				2008		Vinton		
OK	PWS 150	Flash Point	612401	C8I190324001	159	159	deg F				2008		Oklahoma City	1	
OK	PWS 150	Flash Point	619301	C8H130144001	161	161	deg F				2008		Tulsa		
NY	PWS 150	Flash Point	202802	C9C310110001	161	161	deg F				2009		Avon	1	
VA	PWS 150	Flash Point	315401	C8I160286001	163	163	deg F				2008		Chester		
FL	PWS 150	Flash Point	307902	C8H140244001	163	163	deg F				2008		Tallahassee		
NY	PWS 150	Flash Point	202801	C9C280117001	163	163	deg F				2009		Lackawanna	1	
NC	PWS 150	Flash Point	317101	C9F120357001	163	163	deg F				2009		Raleigh	1	
NC	PWS 150	Flash Point	303102	C9G080306001	164	164	deg F				2009		St. Paul	1	
NY	PWS 150	Flash Point	200401	C9E210293001	165	165	deg F				2009		Cohoes	1	
KS	PWS 150	Flash Point	619501	C9F060174001	165	165	deg F				2009		Wichita	1	
NC	PWS 150	Flash Point	303101	C8I230211001	166	166	deg F				2008		Charlotte	1	
NC	PWS 150	Flash Point	306401	C8E300315001	167	167	deg F				2008		Archdale		
NY	PWS 150	Flash Point	202802	C9D020223001	167	167	deg F				2009		Avon	1	
NY	PWS 150	Flash Point	218701	C9C280112001	167	167	deg F				2009		Syracuse	1	
NM	PWS 150	Hexachlorobenzene	700801	C7D180253001	0.025	0.0125	mg/L	U	0.025		2007		Albuquerque		
NY	PWS 150	Hexachlorobenzene	202802	C7E230210001	0.025	0.0125	mg/L	U	0.025		2007		Avon		
ID	PWS 150	Hexachlorobenzene	118308	C7F060245001	0.025	0.0125	mg/L	U	0.025		2007		Boise		
AZ	PWS 150	Hexachlorobenzene	714201	C7H170374001	0.025	0.0125	mg/L	U	0.025		2007		Chandler		
NC	PWS 150	Hexachlorobenzene	303101	C7H150248001	0.025	0.0125	mg/L	U	0.025		2007		Charlotte		
NY	PWS 150	Hexachlorobenzene	200401	C7F260261001	0.025	0.0125	mg/L	U	0.025		2007		Cohoes		
KS	PWS 150	Hexachlorobenzene	619503	C7H060166001	0.025	0.0125	mg/L	U	0.025		2007		Dodge City		
NC	PWS 150	Hexachlorobenzene	306401	C7G110239001	0.025	0.0125	mg/L	U	0.025		2007		High Point		
OK	PWS 150	Hexachlorobenzene	612401	C7H160264001	0.025	0.0125	mg/L	U	0.025		2007		Oklahoma City		
NE	PWS 150	Hexachlorobenzene	512701	C7H170363001	0.025	0.0125	mg/L	U	0.025		2007		Omaha		
MO	PWS 150	Hexachlorobenzene	516003	C7G240284001	0.025	0.0125	mg/L	U	0.025		2007		St. Charles		

State	CLIENT ID	PARAMETER	BRANCH ID	LAB SAMPLE ID	RESULT	Ranked Data	UNITS	QUALIFIER	REPORTING LIMIT	Uth	YEAR	Count	City	DILUTION FACTOR	MDL
NY	PWS 150	Hexachlorobenzene	218701	C7F150407001	0.025	0.0125	mg/L	U	0.025		2007		Syracuse		
OK	PWS 150	Hexachlorobenzene	619301	C7H020363001	0.025	0.0125	mg/L	U	0.025		2007		Tulsa		
KS	PWS 150	Hexachlorobenzene	619501	C7G030446001	0.025	0.0125	mg/L	U	0.025		2007		Wichita		
NY	PWS 150	Hexachlorobenzene	202801	C7F210325001	0.025	0.0125	mg/L	U	0.025		2007		Lackawanna		
NC	PWS 150	Hexachlorobenzene	306401	C7G110239001	0.025	0.0125	mg/L	U	0.025		2007		Archdale		
ID	PWS 150	Hexachlorobenzene	118308	C9D240220001	0.05	0.025	mg/L	U	0.05		2009		Boise	1	0.00091
NC	PWS 150	Hexachlorobenzene	303102	C7G120398001	0.05	0.025	mg/L	U	0.05		2007		St. Paul		
NE	PWS 150	Hexachlorobenzene	506501	C7G260212001	0.03	0.03	mg/L		0.025		2007		Grand Island		
NC	PWS 150	Hexachlorobenzene	303101	C8I230211001	0.13	0.065	mg/L	U	0.13		2008		Charlotte	1	0.000013
NC	PWS 150	Hexachlorobenzene	303102	C8J020304001	0.13	0.065	mg/L	U	0.13		2008		St. Paul	1	0.000013
OK	PWS 150	Hexachlorobenzene	612401	C8I190324001	0.13	0.065	mg/L	U	0.13		2008		Oklahoma City	1	0.000013
NC	PWS 150	Hexachlorobenzene	306401	C9D160222001	0.13	0.065	mg/L	U	0.13		2009		Archdale	1	0.000013
NY	PWS 150	Hexachlorobenzene	202802	C9C310110001	0.13	0.065	mg/L	U	0.13		2009		Avon	1	0.000013
NY	PWS 150	Hexachlorobenzene	202802	C9D020223001	0.13	0.065	mg/L	U	0.13		2009		Avon	1	0.000013
AZ	PWS 150	Hexachlorobenzene	714201	C9H050287001	0.13	0.065	mg/L	U	0.13		2009		Chandler	1	0.000013
VA	PWS 150	Hexachlorobenzene	312101	C9I250178001	0.13	0.065	mg/L	U	0.13		2009		Chesapeake	1	0.000013
OR	PWS 150	Hexachlorobenzene	714801	C9H150188001	0.13	0.065	mg/L	U	0.13		2009		Clackamas	1	0.000013
KS	PWS 150	Hexachlorobenzene	619503	C9I240366001	0.13	0.065	mg/L	U	0.13		2009		Dodge City	1	0.000013
NE	PWS 150	Hexachlorobenzene	506501	C9F100111001	0.13	0.065	mg/L	U	0.13		2009		Grand Island	1	0.000013
NY	PWS 150	Hexachlorobenzene	202801	C9C280117001	0.13	0.065	mg/L	U	0.13		2009		Lackawanna	1	0.000013
OK	PWS 150	Hexachlorobenzene	612401	C9G230261001	0.13	0.065	mg/L	U	0.13		2009		Oklahoma City	1	0.000013
NC	PWS 150	Hexachlorobenzene	317101	C9F120357001	0.13	0.065	mg/L	U	0.13		2009		Raleigh	1	0.000013
NC	PWS 150	Hexachlorobenzene	303102	C9G080306001	0.13	0.065	mg/L	U	0.13		2009		St. Paul	1	0.000013
NY	PWS 150	Hexachlorobenzene	218701	C9C280112001	0.13	0.065	mg/L	U	0.13		2009		Syracuse	1	0.000013
KS	PWS 150	Hexachlorobenzene	619501	C9F060174001	0.13	0.065	mg/L	U	0.13		2009		Wichita	1	0.000013
OR	PWS 150	Hexachlorobenzene	714801	C7I220107001	0.13	0.065	mg/L	U	0.13	37	2007	60	Clackamas		
NC	PWS 150	Hexachlorobenzene	306401	C8E300315001	0.13	0.065	mg/L	U	0.13		2008		Archdale		
NY	PWS 150	Hexachlorobenzene	202802	C8D300152001	0.13	0.065	mg/L	U	0.13		2008		Avon		
VT	PWS 150	Hexachlorobenzene	210501	C8G170336001	0.13	0.065	mg/L	U	0.13		2008		Barre		
ID	PWS 150	Hexachlorobenzene	118308	C8D290257001	0.13	0.065	mg/L	U	0.13		2008		Boise		
AZ	PWS 150	Hexachlorobenzene	714201	C8G310254001	0.13	0.065	mg/L	U	0.13		2008		Chandler		
VA	PWS 150	Hexachlorobenzene	312101	C8I100158001	0.13	0.065	mg/L	U	0.13		2008		Chesapeake		
VA	PWS 150	Hexachlorobenzene	315401	C8I160286001	0.13	0.065	mg/L	U	0.13		2008		Chester		
OR	PWS 150	Hexachlorobenzene	714801	C8H010298001	0.13	0.065	mg/L	U	0.13		2008		Clackamas		
NY	PWS 150	Hexachlorobenzene	200401	C8E020248001	0.13	0.065	mg/L	U	0.13		2008		Cohoes		
KS	PWS 150	Hexachlorobenzene	619503	C8I180216001	0.13	0.065	mg/L	U	0.13		2008		Dodge City		
NE	PWS 150	Hexachlorobenzene	506501	C8F130243001	0.13	0.065	mg/L	U	0.13		2008		Grand Island		
NY	PWS 150	Hexachlorobenzene	202801	C8F270351001	0.13	0.065	mg/L	U	0.13		2008		Lackawanna		
NE	PWS 150	Hexachlorobenzene	512701	C8H010316001	0.13	0.065	mg/L	U	0.13		2008		Omaha		
NC	PWS 150	Hexachlorobenzene	317101	C8H060186001	0.13	0.065	mg/L	U	0.13		2008		Raleigh		
NY	PWS 150	Hexachlorobenzene	218701	C8E010345001	0.13	0.065	mg/L	U	0.13		2008		Syracuse		
FL	PWS 150	Hexachlorobenzene	307902	C8H140244001	0.13	0.065	mg/L	U	0.13		2008		Tallahassee		
OK	PWS 150	Hexachlorobenzene	619301	C8H130144001	0.13	0.065	mg/L	U	0.13		2008		Tulsa		
VA	PWS 150	Hexachlorobenzene	315501	C8H220293001R2	0.13	0.065	mg/L	U	0.13		2008		Vinton		
KS	PWS 150	Hexachlorobenzene	619501	C8F130240001	0.13	0.065	mg/L	U	0.13		2008		Wichita		
VT	PWS 150	Hexachlorobenzene	210501	C9E210297001	0.65	0.325	mg/L	U	0.65		2009		Barre	5	0.000065
NY	PWS 150	Hexachlorobenzene	200401	C9E210293001	0.65	0.325	mg/L	U	0.65		2009		Cohoes	5	0.000065
BC	PWS 150	Hexachlorobenzene	818306	AR2008 8-183-06-3	1	0.5	mg/L	U	1		2008		Langley		
AB	PWS 150	Hexachlorobenzene	819401	L690481-6	1	0.5	mg/L	U	1		2008		Nisku		
ID	PWS 150	Hexachlorobutadiene	118308	C9D240220001	0.05	0.025	mg/L	U	0.05		2009		Boise	1	0.00061
NM	PWS 150	Hexachlorobutadiene	700801	C7D180253001	0.1	0.05	mg/L	U	0.1		2007		Albuquerque		
NY	PWS 150	Hexachlorobutadiene	202802	C7E230210001	0.1	0.05	mg/L	U	0.1		2007		Avon		
ID	PWS 150	Hexachlorobutadiene	118308	C7F060245001	0.1	0.05	mg/L	U	0.1		2007		Boise		
AZ	PWS 150	Hexachlorobutadiene	714201	C7H170374001	0.1	0.05	mg/L	U	0.1		2007		Chandler		
NC	PWS 150	Hexachlorobutadiene	303101	C7H150248001	0.1	0.05	mg/L	U	0.1		2007		Charlotte		
NY	PWS 150	Hexachlorobutadiene	200401	C7F260261001	0.1	0.05	mg/L	U	0.1		2007		Cohoes		
KS	PWS 150	Hexachlorobutadiene	619503	C7H060166001	0.1	0.05	mg/L	U	0.1		2007		Dodge City		
NE	PWS 150	Hexachlorobutadiene	506501	C7G260212001	0.1	0.05	mg/L	U	0.1		2007		Grand Island		
NC	PWS 150	Hexachlorobutadiene	306401	C7G110239001	0.1	0.05	mg/L	U	0.1		2007		High Point		
OK	PWS 150	Hexachlorobutadiene	612401	C7H160264001	0.1	0.05	mg/L	U	0.1		2007		Oklahoma City		
NE	PWS 150	Hexachlorobutadiene	512701	C7H170363001	0.1	0.05	mg/L	U	0.1		2007		Omaha		
MO	PWS 150	Hexachlorobutadiene	516003	C7G240284001	0.1	0.05	mg/L	U	0.1		2007		St. Charles		
NY	PWS 150	Hexachlorobutadiene	218701	C7F150407001	0.1	0.05	mg/L	U	0.1		2007		Syracuse		
OK	PWS 150	Hexachlorobutadiene	619301	C7H020363001	0.1	0.05	mg/L	U	0.1		2007		Tulsa		
KS	PWS 150	Hexachlorobutadiene	619501	C7G030446001	0.1	0.05	mg/L	U	0.1		2007		Wichita		
NY	PWS 150	Hexachlorobutadiene	202801	C7F210325001	0.1	0.05	mg/L	U	0.1		2007		Lackawanna		

State	CLIENT ID	PARAMETER	BRANCH ID	LAB SAMPLE ID	RESULT	Ranked Data	UNITS	QUALIFIER	REPORTING LIMIT	Uth	YEAR	Count	City	DILUTION FACTOR	MDL
NC	PWS 150	Hexachlorobutadiene	306401	C7G110239001	0.1	0.05	mg/L	U	0.1		2007		Archdale		
NC	PWS 150	Hexachlorobutadiene	303102	C7G120398001	0.2	0.1	mg/L	U	0.2		2007		St. Paul		
NC	PWS 150	Hexachlorobutadiene	303101	C8I230211001	0.5	0.25	mg/L	U	0.5		2008		Charlotte	1	
NC	PWS 150	Hexachlorobutadiene	303102	C8J020304001	0.5	0.25	mg/L	U	0.5		2008		St. Paul	1	
OK	PWS 150	Hexachlorobutadiene	612401	C8I190324001	0.5	0.25	mg/L	U	0.5		2008		Oklahoma City	1	
NC	PWS 150	Hexachlorobutadiene	306401	C9D160222001	0.5	0.25	mg/L	U	0.5		2009		Archdale	1	
NY	PWS 150	Hexachlorobutadiene	202802	C9C310110001	0.5	0.25	mg/L	U	0.5		2009		Avon	1	
NY	PWS 150	Hexachlorobutadiene	202802	C9D020223001	0.5	0.25	mg/L	U	0.5		2009		Avon	1	
AZ	PWS 150	Hexachlorobutadiene	714201	C9H050287001	0.5	0.25	mg/L	U	0.5		2009		Chandler	1	0.0000067
VA	PWS 150	Hexachlorobutadiene	312101	C9I250178001	0.5	0.25	mg/L	U	0.5		2009		Chesapeake	1	0.0000067
OR	PWS 150	Hexachlorobutadiene	714801	C9H150188001	0.5	0.25	mg/L	U	0.5		2009		Clackamas	1	0.0000067
KS	PWS 150	Hexachlorobutadiene	619503	C9I240366001	0.5	0.25	mg/L	U	0.5		2009		Dodge City	1	0.0000067
NE	PWS 150	Hexachlorobutadiene	506501	C9F100111001	0.5	0.25	mg/L	U	0.5		2009		Grand Island	1	0.0000067
NY	PWS 150	Hexachlorobutadiene	202801	C9C280117001	0.5	0.25	mg/L	U	0.5		2009		Lackawanna	1	
OK	PWS 150	Hexachlorobutadiene	612401	C9G230261001	0.5	0.25	mg/L	U	0.5		2009		Oklahoma City	1	0.0000067
NC	PWS 150	Hexachlorobutadiene	317101	C9F120357001	0.5	0.25	mg/L	U	0.5		2009		Raleigh	1	0.0000067
NC	PWS 150	Hexachlorobutadiene	303102	C9G080306001	0.5	0.25	mg/L	U	0.5		2009		St. Paul	1	0.0000067
NY	PWS 150	Hexachlorobutadiene	218701	C9C280112001	0.5	0.25	mg/L	U	0.5		2009		Syracuse	1	
KS	PWS 150	Hexachlorobutadiene	619501	C9F060174001	0.5	0.25	mg/L	U	0.5		2009		Wichita	1	0.0000067
OR	PWS 150	Hexachlorobutadiene	714801	C7I220107001	0.5	0.25	mg/L	U	0.5	37	2007	60	Clackamas		
NC	PWS 150	Hexachlorobutadiene	306401	C8E300315001	0.5	0.25	mg/L	U	0.5		2008		Archdale		
NY	PWS 150	Hexachlorobutadiene	202802	C8D300152001	0.5	0.25	mg/L	U	0.5		2008		Avon		
VT	PWS 150	Hexachlorobutadiene	210501	C8G170336001	0.5	0.25	mg/L	U	0.5		2008		Barre		
ID	PWS 150	Hexachlorobutadiene	118308	C8D290257001	0.5	0.25	mg/L	U	0.5		2008		Boise		
AZ	PWS 150	Hexachlorobutadiene	714201	C8G310254001	0.5	0.25	mg/L	U	0.5		2008		Chandler		
VA	PWS 150	Hexachlorobutadiene	312101	C8I100158001	0.5	0.25	mg/L	U	0.5		2008		Chesapeake		
VA	PWS 150	Hexachlorobutadiene	315401	C8I160286001	0.5	0.25	mg/L	U	0.5		2008		Chester		
OR	PWS 150	Hexachlorobutadiene	714801	C8H010298001	0.5	0.25	mg/L	U	0.5		2008		Clackamas		
NY	PWS 150	Hexachlorobutadiene	200401	C8E020248001	0.5	0.25	mg/L	U	0.5		2008		Cohoes		
KS	PWS 150	Hexachlorobutadiene	619503	C8I180216001	0.5	0.25	mg/L	U	0.5		2008		Dodge City		
NE	PWS 150	Hexachlorobutadiene	506501	C8F130243001	0.5	0.25	mg/L	U	0.5		2008		Grand Island		
NY	PWS 150	Hexachlorobutadiene	202801	C8F270351001	0.5	0.25	mg/L	U	0.5		2008		Lackawanna		
NE	PWS 150	Hexachlorobutadiene	512701	C8H010316001	0.5	0.25	mg/L	U	0.5		2008		Omaha		
NC	PWS 150	Hexachlorobutadiene	317101	C8H060186001	0.5	0.25	mg/L	U	0.5		2008		Raleigh		
NY	PWS 150	Hexachlorobutadiene	218701	C8E010345001	0.5	0.25	mg/L	U	0.5		2008		Syracuse		
FL	PWS 150	Hexachlorobutadiene	307902	C8H140244001	0.5	0.25	mg/L	U	0.5		2008		Tallahassee		
OK	PWS 150	Hexachlorobutadiene	619301	C8H130144001	0.5	0.25	mg/L	U	0.5		2008		Tulsa		
VA	PWS 150	Hexachlorobutadiene	315501	C8H220293001R2	0.5	0.25	mg/L	U	0.5		2008		Vinton		
KS	PWS 150	Hexachlorobutadiene	619501	C8F130240001	0.5	0.25	mg/L	U	0.5		2008		Wichita		
VT	PWS 150	Hexachlorobutadiene	210501	C9E210297001	2.5	1.25	mg/L	U	2.5		2009		Barre	5	0.000034
NY	PWS 150	Hexachlorobutadiene	200401	C9E210293001	2.5	1.25	mg/L	U	2.5		2009		Cohoes	5	0.000034
BC	PWS 150	Hexachlorobutadiene	818306	AR2008 8-183-06-3	10	5	mg/L	U	10		2008		Langley		
AB	PWS 150	Hexachlorobutadiene	819401	L690481-6	10	5	mg/L	U	10		2008		Nisku		
ID	PWS 150	Hexachloroethane	118308	C9D240220001	0.05	0.025	mg/L	U	0.05		2009		Boise	1	0.00038
NM	PWS 150	Hexachloroethane	700801	C7D180253001	1	0.5	mg/L	U	1		2007		Albuquerque		
NY	PWS 150	Hexachloroethane	202802	C7E230210001	1	0.5	mg/L	U	1		2007		Avon		
ID	PWS 150	Hexachloroethane	118308	C7F060245001	1	0.5	mg/L	U	1		2007		Boise		
AZ	PWS 150	Hexachloroethane	714201	C7H170374001	1	0.5	mg/L	U	1		2007		Chandler		
NC	PWS 150	Hexachloroethane	303101	C7H150248001	1	0.5	mg/L	U	1		2007		Charlotte		
NY	PWS 150	Hexachloroethane	200401	C7F260261001	1	0.5	mg/L	U	1		2007		Cohoes		
KS	PWS 150	Hexachloroethane	619503	C7H060166001	1	0.5	mg/L	U	1		2007		Dodge City		
NE	PWS 150	Hexachloroethane	506501	C7G260212001	1	0.5	mg/L	U	1		2007		Grand Island		
NC	PWS 150	Hexachloroethane	306401	C7G110239001	1	0.5	mg/L	U	1		2007		High Point		
OK	PWS 150	Hexachloroethane	612401	C7H160264001	1	0.5	mg/L	U	1		2007		Oklahoma City		
NE	PWS 150	Hexachloroethane	512701	C7H170363001	1	0.5	mg/L	U	1		2007		Omaha		
MO	PWS 150	Hexachloroethane	516003	C7G240284001	1	0.5	mg/L	U	1		2007		St. Charles		
NY	PWS 150	Hexachloroethane	218701	C7F150407001	1	0.5	mg/L	U	1		2007		Syracuse		
OK	PWS 150	Hexachloroethane	619301	C7H020363001	1	0.5	mg/L	U	1		2007		Tulsa		
KS	PWS 150	Hexachloroethane	619501	C7G030446001	1	0.5	mg/L	U	1		2007		Wichita		
NY	PWS 150	Hexachloroethane	202801	C7F210325001	1	0.5	mg/L	U	1		2007		Lackawanna		
NC	PWS 150	Hexachloroethane	306401	C7G110239001	1	0.5	mg/L	U	1		2007		Archdale		
NC	PWS 150	Hexachloroethane	303102	C7G120398001	2	1	mg/L	U	2		2007		St. Paul		
NC	PWS 150	Hexachloroethane	303101	C8I230211001	3	1.5	mg/L	U	3		2008		Charlotte	1	
NC	PWS 150	Hexachloroethane	303102	C8J020304001	3	1.5	mg/L	U	3		2008		St. Paul	1	
OK	PWS 150	Hexachloroethane	612401	C8I190324001	3	1.5	mg/L	U	3		2008		Oklahoma City	1	
NC	PWS 150	Hexachloroethane	306401	C9D160222001	3	1.5	mg/L	U	3		2009		Archdale	1	

State	CLIENT ID	PARAMETER	BRANCH ID	LAB SAMPLE ID	RESULT	Ranked Data	UNITS	QUALIFIER	REPORTING LIMIT	Uth	YEAR	Count	City	DILUTION FACTOR	MDL
NY	PWS 150	Hexachloroethane	202802	C9C310110001	3	1.5	mg/L	U	3		2009		Avon	1	
NY	PWS 150	Hexachloroethane	202802	C9D020223001	3	1.5	mg/L	U	3		2009		Avon	1	
AZ	PWS 150	Hexachloroethane	714201	C9H050287001	3	1.5	mg/L	U	3		2009		Chandler	1	
VA	PWS 150	Hexachloroethane	312101	C9I250178001	3	1.5	mg/L	U	3		2009		Chesapeake	1	
OR	PWS 150	Hexachloroethane	714801	C9H150188001	3	1.5	mg/L	U	3		2009		Clackamas	1	
KS	PWS 150	Hexachloroethane	619503	C9I240366001	3	1.5	mg/L	U	3		2009		Dodge City	1	
NE	PWS 150	Hexachloroethane	506501	C9F100111001	3	1.5	mg/L	U	3		2009		Grand Island	1	
NY	PWS 150	Hexachloroethane	202801	C9C280117001	3	1.5	mg/L	U	3		2009		Lackawanna	1	
OK	PWS 150	Hexachloroethane	612401	C9G230261001	3	1.5	mg/L	U	3		2009		Oklahoma City	1	
NC	PWS 150	Hexachloroethane	317101	C9F120357001	3	1.5	mg/L	U	3		2009		Raleigh	1	
NC	PWS 150	Hexachloroethane	303102	C9G080306001	3	1.5	mg/L	U	3		2009		St. Paul	1	
NY	PWS 150	Hexachloroethane	218701	C9C280112001	3	1.5	mg/L	U	3		2009		Syracuse	1	
KS	PWS 150	Hexachloroethane	619501	C9F060174001	3	1.5	mg/L	U	3		2009		Wichita	1	
OR	PWS 150	Hexachloroethane	714801	C7I220107001	3	1.5	mg/L	U	3	37	2007	60	Clackamas		
NC	PWS 150	Hexachloroethane	306401	C8E300315001	3	1.5	mg/L	U	3		2008		Archdale		
NY	PWS 150	Hexachloroethane	202802	C8D300152001	3	1.5	mg/L	U	3		2008		Avon		
VT	PWS 150	Hexachloroethane	210501	C8G170336001	3	1.5	mg/L	U	3		2008		Barre		
ID	PWS 150	Hexachloroethane	118308	C8D290257001	3	1.5	mg/L	U	3		2008		Boise		
AZ	PWS 150	Hexachloroethane	714201	C8G310254001	3	1.5	mg/L	U	3		2008		Chandler		
VA	PWS 150	Hexachloroethane	312101	C8I100158001	3	1.5	mg/L	U	3		2008		Chesapeake		
VA	PWS 150	Hexachloroethane	315401	C8I160286001	3	1.5	mg/L	U	3		2008		Chester		
OR	PWS 150	Hexachloroethane	714801	C8H010298001	3	1.5	mg/L	U	3		2008		Clackamas		
NY	PWS 150	Hexachloroethane	200401	C8E020248001	3	1.5	mg/L	U	3		2008		Cohoes		
KS	PWS 150	Hexachloroethane	619503	C8I180216001	3	1.5	mg/L	U	3		2008		Dodge City		
NE	PWS 150	Hexachloroethane	506501	C8F130243001	3	1.5	mg/L	U	3		2008		Grand Island		
NY	PWS 150	Hexachloroethane	202801	C8F270351001	3	1.5	mg/L	U	3		2008		Lackawanna		
NE	PWS 150	Hexachloroethane	512701	C8H010316001	3	1.5	mg/L	U	3		2008		Omaha		
NC	PWS 150	Hexachloroethane	317101	C8H060186001	3	1.5	mg/L	U	3		2008		Raleigh		
NY	PWS 150	Hexachloroethane	218701	C8E010345001	3	1.5	mg/L	U	3		2008		Syracuse		
FL	PWS 150	Hexachloroethane	307902	C8H140244001	3	1.5	mg/L	U	3		2008		Tallahassee		
OK	PWS 150	Hexachloroethane	619301	C8H130144001	3	1.5	mg/L	U	3		2008		Tulsa		
VA	PWS 150	Hexachloroethane	315501	C8H220293001R2	3	1.5	mg/L	U	3		2008		Vinton		
KS	PWS 150	Hexachloroethane	619501	C8F130240001	3	1.5	mg/L	U	3		2008		Wichita		
BC	PWS 150	Hexachloroethane	818306	AR2008 8-183-06-3	10	5	mg/L	U	10		2008		Langley		
AB	PWS 150	Hexachloroethane	819401	L690481-6	10	5	mg/L	U	10		2008		Nisku		
VT	PWS 150	Hexachloroethane	210501	C9E210297001	15	7.5	mg/L	U	15		2009		Barre	5	
NY	PWS 150	Hexachloroethane	200401	C9E210293001	15	7.5	mg/L	U	15		2009		Cohoes	5	
NY	PWS 150	Lead	202802	C9C310110001	0.3	0.15	mg/L	U	0.3		2009		Avon	1	0.0017
NY	PWS 150	Lead	202802	C9D020223001	0.3	0.15	mg/L	U	0.3		2009		Avon	1	0.0017
VT	PWS 150	Lead	210501	C9E210297001	0.3	0.15	mg/L	U	0.3		2009		Barre	1	0.0017
AZ	PWS 150	Lead	714201	C9H050287001	0.3	0.15	mg/L	U	0.3		2009		Chandler	1	0.0017
NY	PWS 150	Lead	200401	C9E210293001	0.3	0.15	mg/L	U	0.3		2009		Cohoes	1	0.0017
OK	PWS 150	Lead	612401	C9G230261001	0.3	0.15	mg/L	U	0.3		2009		Oklahoma City	1	0.0017
NC	PWS 150	Lead	303102	C9G080306001	0.3	0.15	mg/L	U	0.3		2009		St. Paul	1	0.0017
ID	PWS 150	Lead	118308	C7F060245001	0.3	0.15	mg/L	U	0.3		2007		Boise		
AZ	PWS 150	Lead	714201	C7H170374001	0.3	0.15	mg/L	U	0.3		2007		Chandler		
NC	PWS 150	Lead	303101	C7H150248001	0.3	0.15	mg/L	U	0.3		2007		Charlotte		
OK	PWS 150	Lead	612401	C7H160264001	0.3	0.15	mg/L	U	0.3		2007		Oklahoma City		
NY	PWS 150	Lead	202801	C7F210325001	0.3	0.15	mg/L	U	0.3		2007		Lackawanna		
OR	PWS 150	Lead	714801	C7I220107001	0.3	0.15	mg/L	U	0.3		2007		Clackamas		
NY	PWS 150	Lead	202802	C8D300152001	0.3	0.15	mg/L	U	0.3		2008		Avon		
AZ	PWS 150	Lead	714201	C8G310254001	0.3	0.15	mg/L	U	0.3		2008		Chandler		
NE	PWS 150	Lead	506501	C8F130243001	0.3	0.15	mg/L	U	0.3		2008		Grand Island		
NY	PWS 150	Lead	202801	C8F270351001	0.3	0.15	mg/L	U	0.3		2008		Lackawanna		
ID	PWS 150	Lead	118308	C9D240220001	0.15	0.15	mg/L		0.05		2009		Boise	1	0.0013
BC	PWS 150	Lead	818306	AR2008 8-183-06-3	0.5	0.25	mg/L	U	0.5		2008		Langley		
NY	PWS 150	Lead	200401	C8E020248001	0.3	0.3	mg/L		0.3		2008		Cohoes		
FL	PWS 150	Lead	307902	C8H140244001	0.3	0.3	mg/L		0.3		2008		Tallahassee		
NC	PWS 150	Lead	306401	C7G110239001	0.31	0.31	mg/L		0.3		2007		High Point		
MO	PWS 150	Lead	516003	C7G240284001	0.31	0.31	mg/L		0.3		2007		St. Charles		
NC	PWS 150	Lead	306401	C7G110239001	0.31	0.31	mg/L		0.3		2007		Archdale		
VT	PWS 150	Lead	210501	C8G170336001	0.32	0.32	mg/L		0.3		2008		Barre		
OK	PWS 150	Lead	612401	C8I190324001	0.34	0.34	mg/L		0.3		2008		Oklahoma City	1	0.24
NC	PWS 150	Lead	317101	C8H060186001	0.34	0.34	mg/L		0.3		2008		Raleigh		
KS	PWS 150	Lead	619501	C8F130240001	0.35	0.35	mg/L		0.3		2008		Wichita		
NY	PWS 150	Lead	200401	C7F260261001	0.41	0.41	mg/L		0.3		2007		Cohoes		

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ID	PWS 150	Lead	118308	C8D290257001	0.42	0.42	mg/L		0.3		2008		Boise		
KS	PWS 150	Lead	619501	C7G030446001	0.44	0.44	mg/L		0.3		2007		Wichita		
NE	PWS 150	Lead	506501	C9F100111001	0.44	0.44	mg/L		0.3		2009		Grand Island	1	0.0017
NC	PWS 150	Lead	303102	C7G120398001	0.46	0.46	mg/L		0.3		2007		St. Paul		
OK	PWS 150	Lead	619301	C7H020363001	0.49	0.49	mg/L		0.3		2007		Tulsa		
NC	PWS 150	Lead	303102	C8J020304001	0.55	0.55	mg/L		0.3		2008		St. Paul	1	0.24
NY	PWS 150	Lead	218701	C9C280112001	0.59	0.59	mg/L		0.3		2009		Syracuse	1	0.0017
KS	PWS 150	Lead	619503	C8I180216001	0.65	0.65	mg/L		0.3	37	2008	60	Dodge City		
KS	PWS 150	Lead	619501	C9F060174001	0.74	0.74	mg/L		0.3		2009		Wichita	1	0.0017
NM	PWS 150	Lead	700801	C7D180253001	0.89	0.89	mg/L		0.3		2007		Albuquerque		
VA	PWS 150	Lead	312101	C9I250178001	0.9	0.9	mg/L		0.3		2009		Chesapeake	1	0.14
OR	PWS 150	Lead	714801	C8H010298001	0.91	0.91	mg/L		0.3		2008		Clackamas		
NY	PWS 150	Lead	202801	C9C280117001	0.94	0.94	mg/L		0.3		2009		Lackawanna	1	0.0017
KS	PWS 150	Lead	619503	C7H060166001	1.1	1.1	mg/L		0.3		2007		Dodge City		
NE	PWS 150	Lead	512701	C8H010316001	1.1	1.1	mg/L		0.3		2008		Omaha		
NE	PWS 150	Lead	506501	C7G260212001	1.3	1.3	mg/L		0.3		2007		Grand Island		
NC	PWS 150	Lead	303101	C8I230211001	1.3	1.3	mg/L		0.3		2008		Charlotte	1	0.24
VA	PWS 150	Lead	312101	C8I100158001	1.3	1.3	mg/L		0.3		2008		Chesapeake		
OR	PWS 150	Lead	714801	C9H150188001	1.5	1.5	mg/L		0.3		2009		Clackamas	1	0.0017
NY	PWS 150	Lead	218701	C7F150407001	1.7	1.7	mg/L		0.3		2007		Syracuse		
KS	PWS 150	Lead	619503	C9I240366001	1.9	1.9	mg/L		0.3		2009		Dodge City	1	0.14
NC	PWS 150	Lead	306401	C9D160222001	2.4	2.4	mg/L		0.3		2009		Archdale	1	0.0017
NC	PWS 150	Lead	306401	C8E300315001	2.7	2.7	mg/L		0.3		2008		Archdale		
NE	PWS 150	Lead	512701	C7H170363001	3.3	3.3	mg/L		0.3		2007		Omaha		
NY	PWS 150	Lead	202802	C7E230210001	3.7	3.7	mg/L		0.3		2007		Avon		
VA	PWS 150	Lead	315501	C8H220293001	5.9	5.9	mg/L		0.3		2008		Vinton		
OK	PWS 150	Lead	619301	C8H130144001	6.3	6.3	mg/L		0.3		2008		Tulsa		
VA	PWS 150	Lead	315401	C8I160286001	11.2	11.2	mg/L		0.3		2008		Chester		
NY	PWS 150	Lead	218701	C8E010345001	20.7	20.7	mg/L		0.3		2008		Syracuse		
AB	PWS 150	Lead	819401	L690481-6	25	25	mg/L		0.5		2008		Nisku		
NC	PWS 150	Lead	317101	C9F120357001	33	33	mg/L		0.3		2009		Raleigh	1	0.0017
ID	PWS 150	Mercury	118308	C9D240220001	0.0002	0.0001	mg/L	U	0.0002		2009		Boise	1	0.000038
BC	PWS 150	Mercury	818306	AR2008 8-183-06-3	0.01	0.005	mg/L	U	0.01		2008		Langley		
AB	PWS 150	Mercury	819401	L690481-6	0.01	0.005	mg/L	U	0.01		2008		Nisku		
NC	PWS 150	Mercury	303101	C8I230211001	0.033	0.0165	mg/L	U	0.033		2008		Charlotte	1	0.0071
NC	PWS 150	Mercury	303102	C8J020304001	0.033	0.0165	mg/L	U	0.033		2008		St. Paul	1	0.0071
OK	PWS 150	Mercury	612401	C8I190324001	0.033	0.0165	mg/L	U	0.033		2008		Oklahoma City	1	0.0071
NC	PWS 150	Mercury	306401	C9D160222001	0.033	0.0165	mg/L	U	0.033		2009		Archdale	1	0.011
NY	PWS 150	Mercury	202802	C9C310110001	0.033	0.0165	mg/L	U	0.033		2009		Avon	1	0.011
NY	PWS 150	Mercury	202802	C9D020223001	0.033	0.0165	mg/L	U	0.033		2009		Avon	1	0.011
VT	PWS 150	Mercury	210501	C9E210297001	0.033	0.0165	mg/L	U	0.033		2009		Barre	1	0.011
AZ	PWS 150	Mercury	714201	C9H050287001	0.033	0.0165	mg/L	U	0.033		2009		Chandler	1	0.011
VA	PWS 150	Mercury	312101	C9I250178001	0.033	0.0165	mg/L	U	0.033		2009		Chesapeake	1	0.011
OR	PWS 150	Mercury	714801	C9H150188001	0.033	0.0165	mg/L	U	0.033		2009		Clackamas	1	0.011
NY	PWS 150	Mercury	200401	C9E210293001	0.033	0.0165	mg/L	U	0.033		2009		Cohoes	1	0.011
KS	PWS 150	Mercury	619503	C9I240366001	0.033	0.0165	mg/L	U	0.033		2009		Dodge City	1	0.011
NE	PWS 150	Mercury	506501	C9F100111001	0.033	0.0165	mg/L	U	0.033		2009		Grand Island	1	0.011
NY	PWS 150	Mercury	202801	C9C280117001	0.033	0.0165	mg/L	U	0.033		2009		Lackawanna	1	0.011
OK	PWS 150	Mercury	612401	C9G230261001	0.033	0.0165	mg/L	U	0.033		2009		Oklahoma City	1	0.011
NC	PWS 150	Mercury	317101	C9F120357001	0.033	0.0165	mg/L	U	0.033		2009		Raleigh	1	0.011
NC	PWS 150	Mercury	303102	C9G080306001	0.033	0.0165	mg/L	U	0.033		2009		St. Paul	1	0.011
NY	PWS 150	Mercury	218701	C9C280112001	0.033	0.0165	mg/L	U	0.033		2009		Syracuse	1	0.011
KS	PWS 150	Mercury	619501	C9F060174001	0.033	0.0165	mg/L	U	0.033		2009		Wichita	1	0.011
NM	PWS 150	Mercury	700801	C7D180253001	0.033	0.0165	mg/L	U	0.033		2007		Albuquerque		
NY	PWS 150	Mercury	202802	C7E230210001	0.033	0.0165	mg/L	U	0.033		2007		Avon		
ID	PWS 150	Mercury	118308	C7F060245001	0.033	0.0165	mg/L	U	0.033		2007		Boise		
AZ	PWS 150	Mercury	714201	C7H170374001	0.033	0.0165	mg/L	U	0.033		2007		Chandler		
NC	PWS 150	Mercury	303101	C7H150248001	0.033	0.0165	mg/L	U	0.033		2007		Charlotte		
NY	PWS 150	Mercury	200401	C7F260261001	0.033	0.0165	mg/L	U	0.033		2007		Cohoes		
KS	PWS 150	Mercury	619503	C7H060166001	0.033	0.0165	mg/L	U	0.033		2007		Dodge City		
NE	PWS 150	Mercury	506501	C7G260212001	0.033	0.0165	mg/L	U	0.033		2007		Grand Island		
NC	PWS 150	Mercury	306401	C7G110239001	0.033	0.0165	mg/L	U	0.033		2007		High Point		
OK	PWS 150	Mercury	612401	C7H160264001	0.033	0.0165	mg/L	U	0.033		2007		Oklahoma City		
NE	PWS 150	Mercury	512701	C7H170363001	0.033	0.0165	mg/L	U	0.033		2007		Omaha		
MO	PWS 150	Mercury	516003	C7G240284001	0.033	0.0165	mg/L	U	0.033		2007		St. Charles		
NC	PWS 150	Mercury	303102	C7G120398001	0.033	0.0165	mg/L	U	0.033		2007		St. Paul		

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NY	PWS 150	Mercury	218701	C7F150407001	0.033	0.0165	mg/L	U	0.033		2007		Syracuse		
OK	PWS 150	Mercury	619301	C7H020363001	0.033	0.0165	mg/L	U	0.033	37	2007	60	Tulsa		
KS	PWS 150	Mercury	619501	C7G030446001	0.033	0.0165	mg/L	U	0.033		2007		Wichita		
NY	PWS 150	Mercury	202801	C7F210325001	0.033	0.0165	mg/L	U	0.033		2007		Lackawanna		
NC	PWS 150	Mercury	306401	C7G110239001	0.033	0.0165	mg/L	U	0.033		2007		Archdale		
OR	PWS 150	Mercury	714801	C7I220107001	0.033	0.0165	mg/L	U	0.033		2007		Clackamas		
NY	PWS 150	Mercury	202802	C8D300152001	0.033	0.0165	mg/L	U	0.033		2008		Avon		
VT	PWS 150	Mercury	210501	C8G170336001	0.033	0.0165	mg/L	U	0.033		2008		Barre		
ID	PWS 150	Mercury	118308	C8D290257001	0.033	0.0165	mg/L	U	0.033		2008		Boise		
AZ	PWS 150	Mercury	714201	C8G310254001	0.033	0.0165	mg/L	U	0.033		2008		Chandler		
VA	PWS 150	Mercury	312101	C8I100158001	0.033	0.0165	mg/L	U	0.033		2008		Chesapeake		
VA	PWS 150	Mercury	315401	C8I160286001	0.033	0.0165	mg/L	U	0.033		2008		Chester		
OR	PWS 150	Mercury	714801	C8H010298001	0.033	0.0165	mg/L	U	0.033		2008		Clackamas		
NY	PWS 150	Mercury	200401	C8E020248001	0.033	0.0165	mg/L	U	0.033		2008		Cohoes		
KS	PWS 150	Mercury	619503	C8I180216001	0.033	0.0165	mg/L	U	0.033		2008		Dodge City		
NE	PWS 150	Mercury	506501	C8F130243001	0.033	0.0165	mg/L	U	0.033		2008		Grand Island		
NY	PWS 150	Mercury	202801	C8F270351001	0.033	0.0165	mg/L	U	0.033		2008		Lackawanna		
NE	PWS 150	Mercury	512701	C8H010316001	0.033	0.0165	mg/L	U	0.033		2008		Omaha		
NC	PWS 150	Mercury	317101	C8H060186001	0.033	0.0165	mg/L	U	0.033		2008		Raleigh		
NY	PWS 150	Mercury	218701	C8E010345001	0.033	0.0165	mg/L	U	0.033		2008		Syracuse		
FL	PWS 150	Mercury	307902	C8H140244001	0.033	0.0165	mg/L	U	0.033		2008		Tallahassee		
OK	PWS 150	Mercury	619301	C8H130144001	0.033	0.0165	mg/L	U	0.033		2008		Tulsa		
VA	PWS 150	Mercury	315501	C8H220293001	0.033	0.0165	mg/L	U	0.033		2008		Vinton		
KS	PWS 150	Mercury	619501	C8F130240001	0.033	0.0165	mg/L	U	0.033		2008		Wichita		
NC	PWS 150	Mercury	306401	C8E300315001	0.062	0.062	mg/L		0.033		2008		Archdale		
NC	PWS 150	Methyl Ethyl Ketone	303101	C8I230211001	0.25	0.125	mg/L	U	0.25		2008		Charlotte	1	0.096
NY	PWS 150	Methyl Ethyl Ketone	202802	C9C310110001	0.25	0.125	mg/L	U	0.25		2009		Avon	1	0.096
NY	PWS 150	Methyl Ethyl Ketone	202802	C9D020223001	0.25	0.125	mg/L	U	0.25		2009		Avon	1	0.096
AZ	PWS 150	Methyl Ethyl Ketone	714201	C9H050287001	0.25	0.125	mg/L	U	0.25		2009		Chandler	1	0.096
VA	PWS 150	Methyl Ethyl Ketone	312101	C9I250178001	0.25	0.125	mg/L	U	0.25		2009		Chesapeake	1	0.096
OR	PWS 150	Methyl Ethyl Ketone	714801	C9H150188001	0.25	0.125	mg/L	U	0.25		2009		Clackamas	1	0.096
NY	PWS 150	Methyl Ethyl Ketone	200401	C9E210293001	0.25	0.125	mg/L	U	0.25		2009		Cohoes	1	0.096
KS	PWS 150	Methyl Ethyl Ketone	619503	C9I240366001	0.25	0.125	mg/L	U	0.25		2009		Dodge City	1	0.096
NE	PWS 150	Methyl Ethyl Ketone	506501	C9F100111001	0.25	0.125	mg/L	U	0.25		2009		Grand Island	1	0.011
NY	PWS 150	Methyl Ethyl Ketone	202801	C9C280117001	0.25	0.125	mg/L	U	0.25		2009		Lackawanna	1	0.096
NC	PWS 150	Methyl Ethyl Ketone	317101	C9F120357001	0.25	0.125	mg/L	U	0.25		2009		Raleigh	1	0.096
NC	PWS 150	Methyl Ethyl Ketone	303102	C9G080306001	0.25	0.125	mg/L	U	0.25		2009		St. Paul	1	0.011
NY	PWS 150	Methyl Ethyl Ketone	218701	C9C280112001	0.25	0.125	mg/L	U	0.25		2009		Syracuse	1	0.096
NM	PWS 150	Methyl Ethyl Ketone	700801	C7D180253001	0.25	0.125	mg/L	U	0.25		2007		Albuquerque		
NY	PWS 150	Methyl Ethyl Ketone	202802	C7E230210001	0.25	0.125	mg/L	U	0.25		2007		Avon		
ID	PWS 150	Methyl Ethyl Ketone	118308	C7F060245001	0.25	0.125	mg/L	U	0.25		2007		Boise		
NC	PWS 150	Methyl Ethyl Ketone	303101	C7H150248001	0.25	0.125	mg/L	U	0.25		2007		Charlotte		
NY	PWS 150	Methyl Ethyl Ketone	200401	C7F260261001	0.25	0.125	mg/L	U	0.25		2007		Cohoes		
KS	PWS 150	Methyl Ethyl Ketone	619503	C7H060166001	0.25	0.125	mg/L	U	0.25		2007		Dodge City		
NE	PWS 150	Methyl Ethyl Ketone	506501	C7G260212001	0.25	0.125	mg/L	U	0.25		2007		Grand Island		
NC	PWS 150	Methyl Ethyl Ketone	306401	C7G110239001	0.25	0.125	mg/L	U	0.25		2007		High Point		
OK	PWS 150	Methyl Ethyl Ketone	612401	C7H160264001	0.25	0.125	mg/L	U	0.25		2007		Oklahoma City		
NE	PWS 150	Methyl Ethyl Ketone	512701	C7H170363001	0.25	0.125	mg/L	U	0.25		2007		Omaha		
MO	PWS 150	Methyl Ethyl Ketone	516003	C7G240284001	0.25	0.125	mg/L	U	0.25		2007		St. Charles		
NC	PWS 150	Methyl Ethyl Ketone	303102	C7G120398001	0.25	0.125	mg/L	U	0.25		2007		St. Paul		
NY	PWS 150	Methyl Ethyl Ketone	218701	C7F150407001	0.25	0.125	mg/L	U	0.25		2007		Syracuse		
OK	PWS 150	Methyl Ethyl Ketone	619301	C7H020363001	0.25	0.125	mg/L	U	0.25		2007		Tulsa		
KS	PWS 150	Methyl Ethyl Ketone	619501	C7G030446001	0.25	0.125	mg/L	U	0.25		2007		Wichita		
NY	PWS 150	Methyl Ethyl Ketone	202801	C7F210325001	0.25	0.125	mg/L	U	0.25		2007		Lackawanna		
NC	PWS 150	Methyl Ethyl Ketone	306401	C7G110239001	0.25	0.125	mg/L	U	0.25		2007		Archdale		
OR	PWS 150	Methyl Ethyl Ketone	714801	C7I220107001	0.25	0.125	mg/L	U	0.25		2007		Clackamas		
NC	PWS 150	Methyl Ethyl Ketone	306401	C8E300315001	0.25	0.125	mg/L	U	0.25		2008		Archdale		
NY	PWS 150	Methyl Ethyl Ketone	202802	C8D300152001	0.25	0.125	mg/L	U	0.25		2008		Avon		
VT	PWS 150	Methyl Ethyl Ketone	210501	C8G170336001	0.25	0.125	mg/L	U	0.25		2008		Barre		
ID	PWS 150	Methyl Ethyl Ketone	118308	C8D290257001	0.25	0.125	mg/L	U	0.25		2008		Boise		
AZ	PWS 150	Methyl Ethyl Ketone	714201	C8G310254001	0.25	0.125	mg/L	U	0.25		2008		Chandler		
VA	PWS 150	Methyl Ethyl Ketone	312101	C8I100158001	0.25	0.125	mg/L	U	0.25	37	2008	60	Chesapeake		
VA	PWS 150	Methyl Ethyl Ketone	315401	C8I160286001	0.25	0.125	mg/L	U	0.25		2008		Chester		
OR	PWS 150	Methyl Ethyl Ketone	714801	C8H010298001	0.25	0.125	mg/L	U	0.25		2008		Clackamas		
NY	PWS 150	Methyl Ethyl Ketone	200401	C8E020248001	0.25	0.125	mg/L	U	0.25		2008		Cohoes		
NE	PWS 150	Methyl Ethyl Ketone	506501	C8F130243001	0.25	0.125	mg/L	U	0.25		2008		Grand Island		

State	CLIENT ID	PARAMETER	BRANCH ID	LAB SAMPLE ID	RESULT	Ranked Data	UNITS	QUALIFIER	REPORTING LIMIT	Uth	YEAR	Count	City	DILUTION FACTOR	MDL
NY	PWS 150	Methyl Ethyl Ketone	202801	C8F270351001	0.25	0.125	mg/L	U	0.25		2008		Lackawanna		
NC	PWS 150	Methyl Ethyl Ketone	317101	C8H060186001	0.25	0.125	mg/L	U	0.25		2008		Raleigh		
NY	PWS 150	Methyl Ethyl Ketone	218701	C8E010345001	0.25	0.125	mg/L	U	0.25		2008		Syracuse		
FL	PWS 150	Methyl Ethyl Ketone	307902	C8H140244001	0.25	0.125	mg/L	U	0.25		2008		Tallahassee		
VA	PWS 150	Methyl Ethyl Ketone	315501	C8H220293001	0.25	0.125	mg/L	U	0.25		2008		Vinton		
KS	PWS 150	Methyl Ethyl Ketone	619501	C8F130240001	0.25	0.125	mg/L	U	0.25		2008		Wichita		
NC	PWS 150	Methyl Ethyl Ketone	303102	C8J020304001	0.5	0.25	mg/L	U	0.5		2008		St. Paul	2	0.19
KS	PWS 150	Methyl Ethyl Ketone	619503	C8I180216001	0.5	0.25	mg/L	U	0.5		2008		Dodge City		
NC	PWS 150	Methyl Ethyl Ketone	306401	C9D160222001	0.53	0.53	mg/L		0.25		2009		Archdale	1	0.011
KS	PWS 150	Methyl Ethyl Ketone	619501	C9F060174001	0.54	0.54	mg/L		0.25		2009		Wichita	1	0.011
NE	PWS 150	Methyl Ethyl Ketone	512701	C8H010316001	0.72	0.72	mg/L		0.25		2008		Omaha		
AZ	PWS 150	Methyl Ethyl Ketone	714201	C7H170374001	1.7	1.7	mg/L		0.25		2007		Chandler		
OK	PWS 150	Methyl Ethyl Ketone	619301	C8H130144001	1.7	1.7	mg/L		0.25		2008		Tulsa		
ID	PWS 150	Methyl Ethyl Ketone	118308	C9D240220001	1.9	1.9	mg/L		0.2		2009		Boise	4	0.043
OK	PWS 150	Methyl Ethyl Ketone	612401	C9G230261001	1.9	1.9	mg/L		0.25		2009		Oklahoma City	1	0.096
OK	PWS 150	Methyl Ethyl Ketone	612401	C8I190324001	2.2	2.2	mg/L		0.25		2008		Oklahoma City	1	0.096
VT	PWS 150	Methyl Ethyl Ketone	210501	C9E210297001	5.6	5.6	mg/L		0.25		2009		Barre	1	0.096
BC	PWS 150	Methyl Ethyl Ketone	818306	AR2008 8-183-06-3	100	50	mg/L	U	100		2008		Langley		
AB	PWS 150	Methyl Ethyl Ketone	819401	L690481-6	100	50	mg/L	U	100		2008		Nisku		
ID	PWS 150	Nitrobenzene	118308	C9D240220001	0.05	0.025	mg/L	U	0.05		2009		Boise	1	0.0009
ID	PWS 150	Nitrobenzene	118308	C7F060245001	0.05	0.025	mg/L	U	0.05		2007		Boise		
AZ	PWS 150	Nitrobenzene	714201	C7H170374001	0.05	0.025	mg/L	U	0.05		2007		Chandler		
NC	PWS 150	Nitrobenzene	303101	C7H150248001	0.05	0.025	mg/L	U	0.05		2007		Charlotte		
NY	PWS 150	Nitrobenzene	200401	C7F260261001	0.05	0.025	mg/L	U	0.05		2007		Cohoes		
KS	PWS 150	Nitrobenzene	619503	C7H060166001	0.05	0.025	mg/L	U	0.05		2007		Dodge City		
NE	PWS 150	Nitrobenzene	506501	C7G260212001	0.05	0.025	mg/L	U	0.05		2007		Grand Island		
OK	PWS 150	Nitrobenzene	612401	C7H160264001	0.05	0.025	mg/L	U	0.05		2007		Oklahoma City		
NE	PWS 150	Nitrobenzene	512701	C7H170363001	0.05	0.025	mg/L	U	0.05		2007		Omaha		
MO	PWS 150	Nitrobenzene	516003	C7G240284001	0.05	0.025	mg/L	U	0.05		2007		St. Charles		
NY	PWS 150	Nitrobenzene	218701	C7F150407001	0.05	0.025	mg/L	U	0.05		2007		Syracuse		
OK	PWS 150	Nitrobenzene	619301	C7H020363001	0.05	0.025	mg/L	U	0.05		2007		Tulsa		
NY	PWS 150	Nitrobenzene	202801	C7F210325001	0.05	0.025	mg/L	U	0.05		2007		Lackawanna		
NC	PWS 150	Nitrobenzene	303101	C8I230211001	0.1	0.05	mg/L	U	0.1		2008		Charlotte	1	0.000064
NC	PWS 150	Nitrobenzene	303102	C8J020304001	0.1	0.05	mg/L	U	0.1		2008		St. Paul	1	0.000064
OK	PWS 150	Nitrobenzene	612401	C8I190324001	0.1	0.05	mg/L	U	0.1		2008		Oklahoma City	1	0.000064
NC	PWS 150	Nitrobenzene	306401	C9D160222001	0.1	0.05	mg/L	U	0.1		2009		Archdale	1	0.000018
NY	PWS 150	Nitrobenzene	202802	C9C310110001	0.1	0.05	mg/L	U	0.1		2009		Avon	1	0.000018
NY	PWS 150	Nitrobenzene	202802	C9D020223001	0.1	0.05	mg/L	U	0.1		2009		Avon	1	0.000018
VT	PWS 150	Nitrobenzene	210501	C9E210297001	0.1	0.05	mg/L	U	0.1		2009		Barre	1	0.000018
AZ	PWS 150	Nitrobenzene	714201	C9H050287001	0.1	0.05	mg/L	U	0.1		2009		Chandler	1	0.000018
VA	PWS 150	Nitrobenzene	312101	C9I250178001	0.1	0.05	mg/L	U	0.1		2009		Chesapeake	1	0.000018
OR	PWS 150	Nitrobenzene	714801	C9H150188001	0.1	0.05	mg/L	U	0.1		2009		Clackamas	1	0.000018
NY	PWS 150	Nitrobenzene	200401	C9E210293001	0.1	0.05	mg/L	U	0.1		2009		Cohoes	1	0.000018
KS	PWS 150	Nitrobenzene	619503	C9I240366001	0.1	0.05	mg/L	U	0.1		2009		Dodge City	1	0.000018
NE	PWS 150	Nitrobenzene	506501	C9F100111001	0.1	0.05	mg/L	U	0.1		2009		Grand Island	1	0.000018
NY	PWS 150	Nitrobenzene	202801	C9C280117001	0.1	0.05	mg/L	U	0.1		2009		Lackawanna	1	0.000018
OK	PWS 150	Nitrobenzene	612401	C9G230261001	0.1	0.05	mg/L	U	0.1		2009		Oklahoma City	1	0.000018
NC	PWS 150	Nitrobenzene	317101	C9F120357001	0.1	0.05	mg/L	U	0.1		2009		Raleigh	1	0.000018
NC	PWS 150	Nitrobenzene	303102	C9G080306001	0.1	0.05	mg/L	U	0.1		2009		St. Paul	1	0.000018
NY	PWS 150	Nitrobenzene	218701	C9C280112001	0.1	0.05	mg/L	U	0.1		2009		Syracuse	1	0.000018
KS	PWS 150	Nitrobenzene	619501	C9F060174001	0.1	0.05	mg/L	U	0.1		2009		Wichita	1	0.000018
NM	PWS 150	Nitrobenzene	700801	C7D180253001	0.1	0.05	mg/L	U	0.1		2007		Albuquerque		
NY	PWS 150	Nitrobenzene	202802	C7E230210001	0.1	0.05	mg/L	U	0.1		2007		Avon		
NC	PWS 150	Nitrobenzene	306401	C7G110239001	0.1	0.05	mg/L	U	0.1		2007		High Point		
NC	PWS 150	Nitrobenzene	303102	C7G120398001	0.1	0.05	mg/L	U	0.1		2007		St. Paul		
KS	PWS 150	Nitrobenzene	619501	C7G030446001	0.1	0.05	mg/L	U	0.1	37	2007	60	Wichita		
NC	PWS 150	Nitrobenzene	306401	C7G110239001	0.1	0.05	mg/L	U	0.1		2007		Archdale		
OR	PWS 150	Nitrobenzene	714801	C7I220107001	0.1	0.05	mg/L	U	0.1		2007		Clackamas		
NC	PWS 150	Nitrobenzene	306401	C8E300315001	0.1	0.05	mg/L	U	0.1		2008		Archdale		
NY	PWS 150	Nitrobenzene	202802	C8D300152001	0.1	0.05	mg/L	U	0.1		2008		Avon		
VT	PWS 150	Nitrobenzene	210501	C8G170336001	0.1	0.05	mg/L	U	0.1		2008		Barre		
ID	PWS 150	Nitrobenzene	118308	C8D290257001	0.1	0.05	mg/L	U	0.1		2008		Boise		
AZ	PWS 150	Nitrobenzene	714201	C8G310254001	0.1	0.05	mg/L	U	0.1		2008		Chandler		
VA	PWS 150	Nitrobenzene	312101	C8I100158001	0.1	0.05	mg/L	U	0.1		2008		Chesapeake		
VA	PWS 150	Nitrobenzene	315401	C8I160286001	0.1	0.05	mg/L	U	0.1		2008		Chester		
OR	PWS 150	Nitrobenzene	714801	C8H010298001	0.1	0.05	mg/L	U	0.1		2008		Clackamas		

State	CLIENT ID	PARAMETER	BRANCH ID	LAB SAMPLE ID	RESULT	Ranked Data	UNITS	QUALIFIER	REPORTING LIMIT	Uth	YEAR	Count	City	DILUTION FACTOR	MDL
NY	PWS 150	Nitrobenzene	200401	C8E020248001	0.1	0.05	mg/L	U	0.1		2008		Cohoes		
KS	PWS 150	Nitrobenzene	619503	C8I180216001	0.1	0.05	mg/L	U	0.1		2008		Dodge City		
NE	PWS 150	Nitrobenzene	506501	C8F130243001	0.1	0.05	mg/L	U	0.1		2008		Grand Island		
NY	PWS 150	Nitrobenzene	202801	C8F270351001	0.1	0.05	mg/L	U	0.1		2008		Lackawanna		
NE	PWS 150	Nitrobenzene	512701	C8H010316001	0.1	0.05	mg/L	U	0.1		2008		Omaha		
NC	PWS 150	Nitrobenzene	317101	C8H060186001	0.1	0.05	mg/L	U	0.1		2008		Raleigh		
NY	PWS 150	Nitrobenzene	218701	C8E010345001	0.1	0.05	mg/L	U	0.1		2008		Syracuse		
FL	PWS 150	Nitrobenzene	307902	C8H140244001	0.1	0.05	mg/L	U	0.1		2008		Tallahassee		
OK	PWS 150	Nitrobenzene	619301	C8H130144001	0.1	0.05	mg/L	U	0.1		2008		Tulsa		
VA	PWS 150	Nitrobenzene	315501	C8H220293001	0.1	0.05	mg/L	U	0.1		2008		Vinton		
KS	PWS 150	Nitrobenzene	619501	C8F130240001	0.1	0.05	mg/L	U	0.1		2008		Wichita		
BC	PWS 150	Nitrobenzene	818306	AR2008 8-183-06-3	10	5	mg/L	U	10		2008		Langley		
AB	PWS 150	Nitrobenzene	819401	L690481-6	10	5	mg/L	U	10		2008		Nisku		
NM	PWS 150	Pentachlorophenol	700801	C7D180253001	0.13	0.065	mg/L	U	0.13		2007		Albuquerque		
NY	PWS 150	Pentachlorophenol	202802	C7E230210001	0.13	0.065	mg/L	U	0.13		2007		Avon		
ID	PWS 150	Pentachlorophenol	118308	C7F060245001	0.13	0.065	mg/L	U	0.13		2007		Boise		
AZ	PWS 150	Pentachlorophenol	714201	C7H170374001	0.13	0.065	mg/L	U	0.13		2007		Chandler		
NC	PWS 150	Pentachlorophenol	303101	C7H150248001	0.13	0.065	mg/L	U	0.13		2007		Charlotte		
NY	PWS 150	Pentachlorophenol	200401	C7F260261001	0.13	0.065	mg/L	U	0.13		2007		Cohoes		
KS	PWS 150	Pentachlorophenol	619503	C7H060166001	0.13	0.065	mg/L	U	0.13		2007		Dodge City		
NE	PWS 150	Pentachlorophenol	506501	C7G260212001	0.13	0.065	mg/L	U	0.13		2007		Grand Island		
NC	PWS 150	Pentachlorophenol	306401	C7G110239001	0.13	0.065	mg/L	U	0.13		2007		High Point		
OK	PWS 150	Pentachlorophenol	612401	C7H160264001	0.13	0.065	mg/L	U	0.13		2007		Oklahoma City		
NE	PWS 150	Pentachlorophenol	512701	C7H170363001	0.13	0.065	mg/L	U	0.13		2007		Omaha		
MO	PWS 150	Pentachlorophenol	516003	C7G240284001	0.13	0.065	mg/L	U	0.13		2007		St. Charles		
NY	PWS 150	Pentachlorophenol	218701	C7F150407001	0.13	0.065	mg/L	U	0.13		2007		Syracuse		
OK	PWS 150	Pentachlorophenol	619301	C7H020363001	0.13	0.065	mg/L	U	0.13		2007		Tulsa		
KS	PWS 150	Pentachlorophenol	619501	C7G030446001	0.13	0.065	mg/L	U	0.13		2007		Wichita		
NY	PWS 150	Pentachlorophenol	202801	C7F210325001	0.13	0.065	mg/L	U	0.13		2007		Lackawanna		
NC	PWS 150	Pentachlorophenol	306401	C7G110239001	0.13	0.065	mg/L	U	0.13		2007		Archdale		
ID	PWS 150	Pentachlorophenol	118308	C9D240220001	0.25	0.125	mg/L	U	0.25		2009		Boise	1	0.0094
NC	PWS 150	Pentachlorophenol	303102	C7G120398001	0.26	0.13	mg/L	U	0.26		2007		St. Paul		
BC	PWS 150	Pentachlorophenol	818306	AR2008 8-183-06-3	1	0.5	mg/L	U	1		2008		Langley		
AB	PWS 150	Pentachlorophenol	819401	L690481-6	1	0.5	mg/L	U	1		2008		Nisku		
NC	PWS 150	Pentachlorophenol	306401	C7G110239001	6	3	mg/L	U	6		2007		Archdale		
NC	PWS 150	Pentachlorophenol	303101	C8I230211001	100	50	mg/L	U	100		2008		Charlotte	1	
NC	PWS 150	Pentachlorophenol	303102	C8J020304001	100	50	mg/L	U	100		2008		St. Paul	1	
OK	PWS 150	Pentachlorophenol	612401	C8I190324001	100	50	mg/L	U	100		2008		Oklahoma City	1	
NC	PWS 150	Pentachlorophenol	306401	C9D160222001	100	50	mg/L	U	100		2009		Archdale	1	
NY	PWS 150	Pentachlorophenol	202802	C9C310110001	100	50	mg/L	U	100		2009		Avon	1	
NY	PWS 150	Pentachlorophenol	202802	C9D020223001	100	50	mg/L	U	100		2009		Avon	1	
AZ	PWS 150	Pentachlorophenol	714201	C9H050287001	100	50	mg/L	U	100		2009		Chandler	1	
VA	PWS 150	Pentachlorophenol	312101	C9I250178001	100	50	mg/L	U	100		2009		Chesapeake	1	
OR	PWS 150	Pentachlorophenol	714801	C9H150188001	100	50	mg/L	U	100		2009		Clackamas	1	
KS	PWS 150	Pentachlorophenol	619503	C9I240366001	100	50	mg/L	U	100		2009		Dodge City	1	
NE	PWS 150	Pentachlorophenol	506501	C9F100111001	100	50	mg/L	U	100		2009		Grand Island	1	
NY	PWS 150	Pentachlorophenol	202801	C9C280117001	100	50	mg/L	U	100		2009		Lackawanna	1	
OK	PWS 150	Pentachlorophenol	612401	C9G230261001	100	50	mg/L	U	100		2009		Oklahoma City	1	
NC	PWS 150	Pentachlorophenol	317101	C9F120357001	100	50	mg/L	U	100		2009		Raleigh	1	
NC	PWS 150	Pentachlorophenol	303102	C9G080306001	100	50	mg/L	U	100	37	2009	61	St. Paul	1	
NY	PWS 150	Pentachlorophenol	218701	C9C280112001	100	50	mg/L	U	100		2009		Syracuse	1	
KS	PWS 150	Pentachlorophenol	619501	C9F060174001	100	50	mg/L	U	100		2009		Wichita	1	
OR	PWS 150	Pentachlorophenol	714801	C7I220107001	100	50	mg/L	U	100		2007		Clackamas		
NC	PWS 150	Pentachlorophenol	306401	C8E300315001	100	50	mg/L	U	100		2008		Archdale		
NY	PWS 150	Pentachlorophenol	202802	C8D300152001	100	50	mg/L	U	100		2008		Avon		
VT	PWS 150	Pentachlorophenol	210501	C8G170336001	100	50	mg/L	U	100		2008		Barre		
ID	PWS 150	Pentachlorophenol	118308	C8D290257001	100	50	mg/L	U	100		2008		Boise		
AZ	PWS 150	Pentachlorophenol	714201	C8G310254001	100	50	mg/L	U	100		2008		Chandler		
VA	PWS 150	Pentachlorophenol	312101	C8I100158001	100	50	mg/L	U	100		2008		Chesapeake		
VA	PWS 150	Pentachlorophenol	315401	C8I160286001	100	50	mg/L	U	100		2008		Chester		
OR	PWS 150	Pentachlorophenol	714801	C8H010298001	100	50	mg/L	U	100		2008		Clackamas		
NY	PWS 150	Pentachlorophenol	200401	C8E020248001	100	50	mg/L	U	100		2008		Cohoes		
KS	PWS 150	Pentachlorophenol	619503	C8I180216001	100	50	mg/L	U	100		2008		Dodge City		
NE	PWS 150	Pentachlorophenol	506501	C8F130243001	100	50	mg/L	U	100		2008		Grand Island		
NY	PWS 150	Pentachlorophenol	202801	C8F270351001	100	50	mg/L	U	100		2008		Lackawanna		
NE	PWS 150	Pentachlorophenol	512701	C8H010316001	100	50	mg/L	U	100		2008		Omaha		

State	CLIENT ID	PARAMETER	BRANCH ID	LAB SAMPLE ID	RESULT	Ranked Data	UNITS	QUALIFIER	REPORTING LIMIT	Uth	YEAR	Count	City	DILUTION FACTOR	MDL
NC	PWS 150	Pentachlorophenol	317101	C8H060186001	100	50	mg/L	U	100		2008		Raleigh		
NY	PWS 150	Pentachlorophenol	218701	C8E010345001	100	50	mg/L	U	100		2008		Syracuse		
FL	PWS 150	Pentachlorophenol	307902	C8H140244001	100	50	mg/L	U	100		2008		Tallahassee		
OK	PWS 150	Pentachlorophenol	619301	C8H130144001	100	50	mg/L	U	100		2008		Tulsa		
VA	PWS 150	Pentachlorophenol	315501	C8H220293001R2	100	50	mg/L	U	100		2008		Vinton		
KS	PWS 150	Pentachlorophenol	619501	C8F130240001	100	50	mg/L	U	100		2008		Wichita		
VT	PWS 150	Pentachlorophenol	210501	C9E210297001	500	250	mg/L	U	500		2009		Barre	5	
NY	PWS 150	Pentachlorophenol	200401	C9E210293001	500	250	mg/L	U	500		2009		Cohoes	5	
MO	PWS 150	pH	516003	C7G240284001	4.7	4.7	No Units				2007		St. Charles		
KS	PWS 150	pH	619501	C9F060174001	5	5	No Units				2009		Wichita	1	
VT	PWS 150	pH	210501	C9E210297001	5.2	5.2	No Units				2009		Barre	1	
BC	PWS 150	pH	818306	AR2008 8-183-06-3	5.3	5.3	No Units		0.1		2008		Langley		
KS	PWS 150	pH	619501	C7G030446001	5.4	5.4	No Units				2007		Wichita		
NY	PWS 150	pH	200401	C9E210293001	5.4	5.4	No Units				2009		Cohoes	1	
NY	PWS 150	pH	202801	C7F210325001	5.8	5.8	No Units				2007		Lackawanna		
ID	PWS 150	pH	118308	C7F060245001	5.9	5.9	No Units				2007		Boise		
OK	PWS 150	pH	619301	C7H020363001	6	6	No Units				2007		Tulsa		
NY	PWS 150	pH	200401	C8E020248001	6	6	No Units				2008		Cohoes		
OR	PWS 150	pH	714801	C7I220107001	6.3	6.3	No Units				2007		Clackamas		
NC	PWS 150	pH	303101	C7H150248001	6.4	6.4	No Units				2007		Charlotte		
KS	PWS 150	pH	619503	C7H060166001	6.4	6.4	No Units				2007		Dodge City		
NC	PWS 150	pH	306401	C7G110239001	6.5	6.5	No Units				2007		High Point		
NC	PWS 150	pH	303102	C7G120398001	6.5	6.5	No Units				2007		St. Paul		
NC	PWS 150	pH	306401	C7G110239001	6.5	6.5	No Units				2007		Archdale		
AZ	PWS 150	pH	714201	C8G310254001	6.5	6.5	No Units				2008		Chandler		
OR	PWS 150	pH	714801	C9H150188001	6.6	6.6	--				2009		Clackamas	1	0
FL	PWS 150	pH	307902	C8H140244001	6.6	6.6	No Units				2008		Tallahassee		
NY	PWS 150	pH	200401	C7F260261001	6.7	6.7	No Units				2007		Cohoes		
NY	PWS 150	pH	218701	C7F150407001	6.7	6.7	No Units				2007		Syracuse		
NC	PWS 150	pH	306401	C9D160222001	6.7	6.7	No Units				2009		Archdale	1	
NY	PWS 150	pH	202802	C9D020223001	6.7	6.7	No Units				2009		Avon	1	
KS	PWS 150	pH	619503	C9I240366001	6.7	6.7	--				2009		Dodge City	1	0
VA	PWS 150	pH	312101	C8I100158001	6.7	6.7	No Units				2008		Chesapeake		
NY	PWS 150	pH	202801	C8F270351001	6.7	6.7	No Units				2008		Lackawanna		
AZ	PWS 150	pH	714201	C7H170374001	6.8	6.8	No Units				2007		Chandler		
VA	PWS 150	pH	312101	C9I250178001	6.8	6.8	--				2009		Chesapeake	1	0
NY	PWS 150	pH	202802	C8D300152001	6.8	6.8	No Units				2008		Avon		
VT	PWS 150	pH	210501	C8G170336001	6.8	6.8	No Units				2008		Barre		
KS	PWS 150	pH	619503	C8I180216001	6.8	6.8	No Units				2008		Dodge City		
AB	PWS 150	pH	819401	L690481-6	6.9	6.9	No Units		0.1		2008		Nisku		
AZ	PWS 150	pH	714201	C9H050287001	7	7	No Units				2009		Chandler	1	
NY	PWS 150	pH	202801	C9C280117001	7	7	No Units				2009		Lackawanna	1	
VA	PWS 150	pH	315401	C8I160286001	7	7	No Units				2008		Chester		
NE	PWS 150	pH	512701	C8H010316001	7	7	No Units				2008		Omaha		
NC	PWS 150	pH	317101	C9F120357001	7.1	7.1	No Units			37	2009	60	Raleigh	1	
ID	PWS 150	pH	118308	C8D290257001	7.1	7.1	No Units				2008		Boise		
OR	PWS 150	pH	714801	C8H010298001	7.1	7.1	No Units				2008		Clackamas		
NY	PWS 150	pH	202802	C9C310110001	7.2	7.2	No Units				2009		Avon	1	
VA	PWS 150	pH	315501	C8H220293001	7.2	7.2	No Units				2008		Vinton		
NY	PWS 150	pH	202802	C7E230210001	7.3	7.3	No Units				2007		Avon		
NE	PWS 150	pH	512701	C7H170363001	7.3	7.3	No Units				2007		Omaha		
NC	PWS 150	pH	303102	C8J020304001	7.3	7.3	No Units				2008		St. Paul	1	
NC	PWS 150	pH	306401	C8E300315001	7.3	7.3	No Units				2008		Archdale		
NE	PWS 150	pH	506501	C9F100111001	7.4	7.4	No Units				2009		Grand Island	1	
OK	PWS 150	pH	612401	C9G230261001	7.4	7.4	No Units				2009		Oklahoma City	1	
NC	PWS 150	pH	303101	C8I230211001	7.5	7.5	No Units				2008		Charlotte	1	
NC	PWS 150	pH	317101	C8H060186001	7.6	7.6	No Units				2008		Raleigh		
NE	PWS 150	pH	506501	C7G260212001	7.7	7.7	No Units				2007		Grand Island		
KS	PWS 150	pH	619501	C8F130240001	7.8	7.8	No Units				2008		Wichita		
NM	PWS 150	pH	700801	C7D180253001	7.9	7.9	No Units				2007		Albuquerque		
NY	PWS 150	pH	218701	C9C280112001	7.9	7.9	No Units				2009		Syracuse	1	
NE	PWS 150	pH	506501	C8F130243001	8	8	No Units				2008		Grand Island		
ID	PWS 150	pH	118308	C9D240220001	8.1	8.1	No Units				2009		Boise	1	
OK	PWS 150	pH	612401	C7H160264001	8.2	8.2	No Units				2007		Oklahoma City		
NY	PWS 150	pH	218701	C8E010345001	8.6	8.6	No Units				2008		Syracuse		
OK	PWS 150	pH	619301	C8H130144001	8.8	8.8	No Units				2008		Tulsa		

State	CLIENT ID	PARAMETER	BRANCH ID	LAB SAMPLE ID	RESULT	Ranked Data	UNITS	QUALIFIER	REPORTING LIMIT	Uth	YEAR	Count	City	DILUTION FACTOR	MDL
OK	PWS 150	pH	612401	C8I190324001	9.7	9.7	No Units				2008		Oklahoma City	1	
NC	PWS 150	pH	303102	C9G080306001	10.3	10.3	No Units				2009		St. Paul	1	
ID	PWS 150	Pyridine	118308	C7F060245001	0.05	0.025	mg/L	U	0.05		2007		Boise		
AZ	PWS 150	Pyridine	714201	C7H170374001	0.05	0.025	mg/L	U	0.05		2007		Chandler		
NC	PWS 150	Pyridine	303101	C7H150248001	0.05	0.025	mg/L	U	0.05		2007		Charlotte		
NY	PWS 150	Pyridine	200401	C7F260261001	0.05	0.025	mg/L	U	0.05		2007		Cohoes		
KS	PWS 150	Pyridine	619503	C7H060166001	0.05	0.025	mg/L	U	0.05		2007		Dodge City		
OK	PWS 150	Pyridine	612401	C7H160264001	0.05	0.025	mg/L	U	0.05		2007		Oklahoma City		
NE	PWS 150	Pyridine	512701	C7H170363001	0.05	0.025	mg/L	U	0.05		2007		Omaha		
MO	PWS 150	Pyridine	516003	C7G240284001	0.05	0.025	mg/L	U	0.05		2007		St. Charles		
NY	PWS 150	Pyridine	218701	C7F150407001	0.05	0.025	mg/L	U	0.05		2007		Syracuse		
OK	PWS 150	Pyridine	619301	C7H020363001	0.05	0.025	mg/L	U	0.05		2007		Tulsa		
NY	PWS 150	Pyridine	202801	C7F210325001	0.05	0.025	mg/L	U	0.05		2007		Lackawanna		
ID	PWS 150	Pyridine	118308	C9D240220001	0.1	0.05	mg/L	U	0.1		2009		Boise	1	0.0047
NM	PWS 150	Pyridine	700801	C7D180253001	0.1	0.05	mg/L	U	0.1		2007		Albuquerque		
NY	PWS 150	Pyridine	202802	C7E230210001	0.1	0.05	mg/L	U	0.1		2007		Avon		
NC	PWS 150	Pyridine	306401	C7G110239001	0.1	0.05	mg/L	U	0.1		2007		High Point		
NC	PWS 150	Pyridine	303102	C7G120398001	0.1	0.05	mg/L	U	0.1		2007		St. Paul		
KS	PWS 150	Pyridine	619501	C7G030446001	0.1	0.05	mg/L	U	0.1		2007		Wichita		
NC	PWS 150	Pyridine	306401	C7G110239001	0.1	0.05	mg/L	U	0.1		2007		Archdale		
NC	PWS 150	Pyridine	303101	C8I230211001	0.5	0.25	mg/L	U	0.5		2008		Charlotte	1	0.000071
NC	PWS 150	Pyridine	303102	C8J020304001	0.5	0.25	mg/L	U	0.5		2008		St. Paul	1	0.000071
OK	PWS 150	Pyridine	612401	C8I190324001	0.5	0.25	mg/L	U	0.5		2008		Oklahoma City	1	0.000071
NC	PWS 150	Pyridine	306401	C9D160222001	0.5	0.25	mg/L	U	0.5		2009		Archdale	1	0.000094
NY	PWS 150	Pyridine	202802	C9C310110001	0.5	0.25	mg/L	U	0.5		2009		Avon	1	0.000094
NY	PWS 150	Pyridine	202802	C9D020223001	0.5	0.25	mg/L	U	0.5		2009		Avon	1	0.000094
VT	PWS 150	Pyridine	210501	C9E210297001	0.5	0.25	mg/L	U	0.5		2009		Barre	1	0.000094
AZ	PWS 150	Pyridine	714201	C9H050287001	0.5	0.25	mg/L	U	0.5		2009		Chandler	1	0.000094
VA	PWS 150	Pyridine	312101	C9I250178001	0.5	0.25	mg/L	U	0.5		2009		Chesapeake	1	0.000094
OR	PWS 150	Pyridine	714801	C9H150188001	0.5	0.25	mg/L	U	0.5		2009		Clackamas	1	0.000094
NY	PWS 150	Pyridine	200401	C9E210293001	0.5	0.25	mg/L	U	0.5		2009		Cohoes	1	0.000094
KS	PWS 150	Pyridine	619503	C9I240366001	0.5	0.25	mg/L	U	0.5		2009		Dodge City	1	0.000094
NE	PWS 150	Pyridine	506501	C9F100111001	0.5	0.25	mg/L	U	0.5		2009		Grand Island	1	0.000094
NY	PWS 150	Pyridine	202801	C9C280117001	0.5	0.25	mg/L	U	0.5		2009		Lackawanna	1	0.000094
OK	PWS 150	Pyridine	612401	C9G230261001	0.5	0.25	mg/L	U	0.5		2009		Oklahoma City	1	0.000094
NC	PWS 150	Pyridine	317101	C9F120357001	0.5	0.25	mg/L	U	0.5		2009		Raleigh	1	0.000094
NC	PWS 150	Pyridine	303102	C9G080306001	0.5	0.25	mg/L	U	0.5		2009		St. Paul	1	0.000094
NY	PWS 150	Pyridine	218701	C9C280112001	0.5	0.25	mg/L	U	0.5		2009		Syracuse	1	0.000094
KS	PWS 150	Pyridine	619501	C9F060174001	0.5	0.25	mg/L	U	0.5	37	2009	60	Wichita	1	0.000094
OR	PWS 150	Pyridine	714801	C7I220107001	0.5	0.25	mg/L	U	0.5		2007		Clackamas		
NC	PWS 150	Pyridine	306401	C8E300315001	0.5	0.25	mg/L	U	0.5		2008		Archdale		
NY	PWS 150	Pyridine	202802	C8D300152001	0.5	0.25	mg/L	U	0.5		2008		Avon		
VT	PWS 150	Pyridine	210501	C8G170336001	0.5	0.25	mg/L	U	0.5		2008		Barre		
ID	PWS 150	Pyridine	118308	C8D290257001	0.5	0.25	mg/L	U	0.5		2008		Boise		
AZ	PWS 150	Pyridine	714201	C8G310254001	0.5	0.25	mg/L	U	0.5		2008		Chandler		
VA	PWS 150	Pyridine	312101	C8I100158001	0.5	0.25	mg/L	U	0.5		2008		Chesapeake		
VA	PWS 150	Pyridine	315401	C8I160286001	0.5	0.25	mg/L	U	0.5		2008		Chester		
OR	PWS 150	Pyridine	714801	C8H010298001	0.5	0.25	mg/L	U	0.5		2008		Clackamas		
NY	PWS 150	Pyridine	200401	C8E020248001	0.5	0.25	mg/L	U	0.5		2008		Cohoes		
KS	PWS 150	Pyridine	619503	C8I180216001	0.5	0.25	mg/L	U	0.5		2008		Dodge City		
NE	PWS 150	Pyridine	506501	C8F130243001	0.5	0.25	mg/L	U	0.5		2008		Grand Island		
NY	PWS 150	Pyridine	202801	C8F270351001	0.5	0.25	mg/L	U	0.5		2008		Lackawanna		
NE	PWS 150	Pyridine	512701	C8H010316001	0.5	0.25	mg/L	U	0.5		2008		Omaha		
NC	PWS 150	Pyridine	317101	C8H060186001	0.5	0.25	mg/L	U	0.5		2008		Raleigh		
NY	PWS 150	Pyridine	218701	C8E010345001	0.5	0.25	mg/L	U	0.5		2008		Syracuse		
FL	PWS 150	Pyridine	307902	C8H140244001	0.5	0.25	mg/L	U	0.5		2008		Tallahassee		
OK	PWS 150	Pyridine	619301	C8H130144001	0.5	0.25	mg/L	U	0.5		2008		Tulsa		
VA	PWS 150	Pyridine	315501	C8H220293001	0.5	0.25	mg/L	U	0.5		2008		Vinton		
KS	PWS 150	Pyridine	619501	C8F130240001	0.5	0.25	mg/L	U	0.5		2008		Wichita		
NE	PWS 150	Pyridine	506501	C7G260212001	0.58	0.58	mg/L		0.05		2007		Grand Island		
AB	PWS 150	Pyridine	819401	L690481-6	5	2.5	mg/L	U	5		2008		Nisku		
BC	PWS 150	Pyridine	818306	AR2008 8-183-06-3	50	25	mg/L	U	50		2008		Langley		
ID	PWS 150	Selenium	118308	C9D240220001	0.05	0.025	mg/L	U	0.05		2009		Boise	1	0.003
BC	PWS 150	Selenium	818306	AR2008 8-183-06-3	0.2	0.1	mg/L	U	0.2		2008		Langley		
AB	PWS 150	Selenium	819401	L690481-6	0.2	0.2	mg/L		0.2		2008		Nisku		
NC	PWS 150	Selenium	303101	C8I230211001	0.5	0.25	mg/L	U	0.5		2008		Charlotte	1	0.25

State	CLIENT ID	PARAMETER	BRANCH ID	LAB SAMPLE ID	RESULT	Ranked Data	UNITS	QUALIFIER	REPORTING LIMIT	Uth	YEAR	Count	City	DILUTION FACTOR	MDL
NC	PWS 150	Selenium	303102	C8J020304001	0.5	0.25	mg/L	U	0.5		2008		St. Paul	1	0.25
OK	PWS 150	Selenium	612401	C8I190324001	0.5	0.25	mg/L	U	0.5		2008		Oklahoma City	1	0.25
NC	PWS 150	Selenium	306401	C9D160222001	0.5	0.25	mg/L	U	0.5		2009		Archdale	1	0.0029
NY	PWS 150	Selenium	202802	C9C310110001	0.5	0.25	mg/L	U	0.5		2009		Avon	1	0.0029
NY	PWS 150	Selenium	202802	C9D020223001	0.5	0.25	mg/L	U	0.5		2009		Avon	1	0.0029
VT	PWS 150	Selenium	210501	C9E210297001	0.5	0.25	mg/L	U	0.5		2009		Barre	1	0.0029
AZ	PWS 150	Selenium	714201	C9H050287001	0.5	0.25	mg/L	U	0.5		2009		Chandler	1	0.0029
VA	PWS 150	Selenium	312101	C9I250178001	0.5	0.25	mg/L	U	0.5		2009		Chesapeake	1	0.21
OR	PWS 150	Selenium	714801	C9H150188001	0.5	0.25	mg/L	U	0.5		2009		Clackamas	1	0.0029
NY	PWS 150	Selenium	200401	C9E210293001	0.5	0.25	mg/L	U	0.5		2009		Cohoes	1	0.0029
KS	PWS 150	Selenium	619503	C9I240366001	0.5	0.25	mg/L	U	0.5		2009		Dodge City	1	0.21
NE	PWS 150	Selenium	506501	C9F100111001	0.5	0.25	mg/L	U	0.5		2009		Grand Island	1	0.0029
NY	PWS 150	Selenium	202801	C9C280117001	0.5	0.25	mg/L	U	0.5		2009		Lackawanna	1	0.0029
OK	PWS 150	Selenium	612401	C9G230261001	0.5	0.25	mg/L	U	0.5		2009		Oklahoma City	1	0.0029
NC	PWS 150	Selenium	317101	C9F120357001	0.5	0.25	mg/L	U	0.5		2009		Raleigh	1	0.0029
NC	PWS 150	Selenium	303102	C9G080306001	0.5	0.25	mg/L	U	0.5		2009		St. Paul	1	0.0029
NY	PWS 150	Selenium	218701	C9C280112001	0.5	0.25	mg/L	U	0.5		2009		Syracuse	1	0.0029
KS	PWS 150	Selenium	619501	C9F060174001	0.5	0.25	mg/L	U	0.5		2009		Wichita	1	0.0029
NM	PWS 150	Selenium	700801	C7D180253001	0.5	0.25	mg/L	U	0.5		2007		Albuquerque		
NY	PWS 150	Selenium	202802	C7E230210001	0.5	0.25	mg/L	U	0.5		2007		Avon		
ID	PWS 150	Selenium	118308	C7F060245001	0.5	0.25	mg/L	U	0.5		2007		Boise		
AZ	PWS 150	Selenium	714201	C7H170374001	0.5	0.25	mg/L	U	0.5		2007		Chandler		
NC	PWS 150	Selenium	303101	C7H150248001	0.5	0.25	mg/L	U	0.5		2007		Charlotte		
NY	PWS 150	Selenium	200401	C7F260261001	0.5	0.25	mg/L	U	0.5		2007		Cohoes		
KS	PWS 150	Selenium	619503	C7H060166001	0.5	0.25	mg/L	U	0.5		2007		Dodge City		
NE	PWS 150	Selenium	506501	C7G260212001	0.5	0.25	mg/L	U	0.5		2007		Grand Island		
NC	PWS 150	Selenium	306401	C7G110239001	0.5	0.25	mg/L	U	0.5		2007		High Point		
OK	PWS 150	Selenium	612401	C7H160264001	0.5	0.25	mg/L	U	0.5		2007		Oklahoma City		
NE	PWS 150	Selenium	512701	C7H170363001	0.5	0.25	mg/L	U	0.5		2007		Omaha		
MO	PWS 150	Selenium	516003	C7G240284001	0.5	0.25	mg/L	U	0.5		2007		St. Charles		
NC	PWS 150	Selenium	303102	C7G120398001	0.5	0.25	mg/L	U	0.5		2007		St. Paul		
NY	PWS 150	Selenium	218701	C7F150407001	0.5	0.25	mg/L	U	0.5		2007		Syracuse		
OK	PWS 150	Selenium	619301	C7H020363001	0.5	0.25	mg/L	U	0.5	37	2007	60	Tulsa		
KS	PWS 150	Selenium	619501	C7G030446001	0.5	0.25	mg/L	U	0.5		2007		Wichita		
NY	PWS 150	Selenium	202801	C7F210325001	0.5	0.25	mg/L	U	0.5		2007		Lackawanna		
NC	PWS 150	Selenium	306401	C7G110239001	0.5	0.25	mg/L	U	0.5		2007		Archdale		
OR	PWS 150	Selenium	714801	C7I220107001	0.5	0.25	mg/L	U	0.5		2007		Clackamas		
NC	PWS 150	Selenium	306401	C8E300315001	0.5	0.25	mg/L	U	0.5		2008		Archdale		
NY	PWS 150	Selenium	202802	C8D300152001	0.5	0.25	mg/L	U	0.5		2008		Avon		
VT	PWS 150	Selenium	210501	C8G170336001	0.5	0.25	mg/L	U	0.5		2008		Barre		
ID	PWS 150	Selenium	118308	C8D290257001	0.5	0.25	mg/L	U	0.5		2008		Boise		
AZ	PWS 150	Selenium	714201	C8G310254001	0.5	0.25	mg/L	U	0.5		2008		Chandler		
VA	PWS 150	Selenium	312101	C8I100158001	0.5	0.25	mg/L	U	0.5		2008		Chesapeake		
VA	PWS 150	Selenium	315401	C8I160286001	0.5	0.25	mg/L	U	0.5		2008		Chester		
OR	PWS 150	Selenium	714801	C8H010298001	0.5	0.25	mg/L	U	0.5		2008		Clackamas		
NY	PWS 150	Selenium	200401	C8E020248001	0.5	0.25	mg/L	U	0.5		2008		Cohoes		
KS	PWS 150	Selenium	619503	C8I180216001	0.5	0.25	mg/L	U	0.5		2008		Dodge City		
NE	PWS 150	Selenium	506501	C8F130243001	0.5	0.25	mg/L	U	0.5		2008		Grand Island		
NY	PWS 150	Selenium	202801	C8F270351001	0.5	0.25	mg/L	U	0.5		2008		Lackawanna		
NE	PWS 150	Selenium	512701	C8H010316001	0.5	0.25	mg/L	U	0.5		2008		Omaha		
NC	PWS 150	Selenium	317101	C8H060186001	0.5	0.25	mg/L	U	0.5		2008		Raleigh		
NY	PWS 150	Selenium	218701	C8E010345001	0.5	0.25	mg/L	U	0.5		2008		Syracuse		
FL	PWS 150	Selenium	307902	C8H140244001	0.5	0.25	mg/L	U	0.5		2008		Tallahassee		
OK	PWS 150	Selenium	619301	C8H130144001	0.5	0.25	mg/L	U	0.5		2008		Tulsa		
VA	PWS 150	Selenium	315501	C8H220293001	0.5	0.25	mg/L	U	0.5		2008		Vinton		
KS	PWS 150	Selenium	619501	C8F130240001	0.5	0.25	mg/L	U	0.5		2008		Wichita		
ID	PWS 150	Silver	118308	C9D240220001	0.05	0.025	mg/L	U	0.05		2009		Boise	1	0.00068
NC	PWS 150	Silver	303101	C8I230211001	0.5	0.25	mg/L	U	0.5		2008		Charlotte	1	0.059
NC	PWS 150	Silver	303102	C8J020304001	0.5	0.25	mg/L	U	0.5		2008		St. Paul	1	0.059
OK	PWS 150	Silver	612401	C8I190324001	0.5	0.25	mg/L	U	0.5		2008		Oklahoma City	1	0.059
NC	PWS 150	Silver	306401	C9D160222001	0.5	0.25	mg/L	U	0.5		2009		Archdale	1	0.00054
NY	PWS 150	Silver	202802	C9C310110001	0.5	0.25	mg/L	U	0.5		2009		Avon	1	0.00054
NY	PWS 150	Silver	202802	C9D020223001	0.5	0.25	mg/L	U	0.5		2009		Avon	1	0.00054
VT	PWS 150	Silver	210501	C9E210297001	0.5	0.25	mg/L	U	0.5		2009		Barre	1	0.00054
AZ	PWS 150	Silver	714201	C9H050287001	0.5	0.25	mg/L	U	0.5		2009		Chandler	1	0.00054
VA	PWS 150	Silver	312101	C9I250178001	0.5	0.25	mg/L	U	0.5		2009		Chesapeake	1	0.058

State	CLIENT ID	PARAMETER	BRANCH ID	LAB SAMPLE ID	RESULT	Ranked Data	UNITS	QUALIFIER	REPORTING LIMIT	Uth	YEAR	Count	City	DILUTION FACTOR	MDL
OR	PWS 150	Silver	714801	C9H150188001	0.5	0.25	mg/L	U	0.5		2009		Clackamas	1	0.00054
NY	PWS 150	Silver	200401	C9E210293001	0.5	0.25	mg/L	U	0.5		2009		Cohoes	1	0.00054
KS	PWS 150	Silver	619503	C9I240366001	0.5	0.25	mg/L	U	0.5		2009		Dodge City	1	0.058
NE	PWS 150	Silver	506501	C9F100111001	0.5	0.25	mg/L	U	0.5		2009		Grand Island	1	0.00054
NY	PWS 150	Silver	202801	C9C280117001	0.5	0.25	mg/L	U	0.5		2009		Lackawanna	1	0.00054
OK	PWS 150	Silver	612401	C9G230261001	0.5	0.25	mg/L	U	0.5		2009		Oklahoma City	1	0.00054
NC	PWS 150	Silver	317101	C9F120357001	0.5	0.25	mg/L	U	0.5		2009		Raleigh	1	0.00054
NC	PWS 150	Silver	303102	C9G080306001	0.5	0.25	mg/L	U	0.5		2009		St. Paul	1	0.00054
NY	PWS 150	Silver	218701	C9C280112001	0.5	0.25	mg/L	U	0.5		2009		Syracuse	1	0.00054
KS	PWS 150	Silver	619501	C9F060174001	0.5	0.25	mg/L	U	0.5		2009		Wichita	1	0.00054
NM	PWS 150	Silver	700801	C7D180253001	0.5	0.25	mg/L	U	0.5		2007		Albuquerque		
NY	PWS 150	Silver	202802	C7E230210001	0.5	0.25	mg/L	U	0.5		2007		Avon		
ID	PWS 150	Silver	118308	C7F060245001	0.5	0.25	mg/L	U	0.5		2007		Boise		
AZ	PWS 150	Silver	714201	C7H170374001	0.5	0.25	mg/L	U	0.5		2007		Chandler		
NC	PWS 150	Silver	303101	C7H150248001	0.5	0.25	mg/L	U	0.5		2007		Charlotte		
NY	PWS 150	Silver	200401	C7F260261001	0.5	0.25	mg/L	U	0.5		2007		Cohoes		
KS	PWS 150	Silver	619503	C7H060166001	0.5	0.25	mg/L	U	0.5		2007		Dodge City		
NE	PWS 150	Silver	506501	C7G260212001	0.5	0.25	mg/L	U	0.5		2007		Grand Island		
NC	PWS 150	Silver	306401	C7G110239001	0.5	0.25	mg/L	U	0.5		2007		High Point		
OK	PWS 150	Silver	612401	C7H160264001	0.5	0.25	mg/L	U	0.5		2007		Oklahoma City		
NE	PWS 150	Silver	512701	C7H170363001	0.5	0.25	mg/L	U	0.5		2007		Omaha		
MO	PWS 150	Silver	516003	C7G240284001	0.5	0.25	mg/L	U	0.5		2007		St. Charles		
NC	PWS 150	Silver	303102	C7G120398001	0.5	0.25	mg/L	U	0.5		2007		St. Paul		
NY	PWS 150	Silver	218701	C7F150407001	0.5	0.25	mg/L	U	0.5		2007		Syracuse		
OK	PWS 150	Silver	619301	C7H020363001	0.5	0.25	mg/L	U	0.5		2007		Tulsa		
KS	PWS 150	Silver	619501	C7G030446001	0.5	0.25	mg/L	U	0.5		2007		Wichita		
NY	PWS 150	Silver	202801	C7F210325001	0.5	0.25	mg/L	U	0.5	37	2007	60	Lackawanna		
NC	PWS 150	Silver	306401	C7G110239001	0.5	0.25	mg/L	U	0.5		2007		Archdale		
OR	PWS 150	Silver	714801	C7I220107001	0.5	0.25	mg/L	U	0.5		2007		Clackamas		
NC	PWS 150	Silver	306401	C8E300315001	0.5	0.25	mg/L	U	0.5		2008		Archdale		
NY	PWS 150	Silver	202802	C8D300152001	0.5	0.25	mg/L	U	0.5		2008		Avon		
VT	PWS 150	Silver	210501	C8G170336001	0.5	0.25	mg/L	U	0.5		2008		Barre		
ID	PWS 150	Silver	118308	C8D290257001	0.5	0.25	mg/L	U	0.5		2008		Boise		
AZ	PWS 150	Silver	714201	C8G310254001	0.5	0.25	mg/L	U	0.5		2008		Chandler		
VA	PWS 150	Silver	312101	C8I100158001	0.5	0.25	mg/L	U	0.5		2008		Chesapeake		
VA	PWS 150	Silver	315401	C8I160286001	0.5	0.25	mg/L	U	0.5		2008		Chester		
OR	PWS 150	Silver	714801	C8H010298001	0.5	0.25	mg/L	U	0.5		2008		Clackamas		
NY	PWS 150	Silver	200401	C8E020248001	0.5	0.25	mg/L	U	0.5		2008		Cohoes		
KS	PWS 150	Silver	619503	C8I180216001	0.5	0.25	mg/L	U	0.5		2008		Dodge City		
NE	PWS 150	Silver	506501	C8F130243001	0.5	0.25	mg/L	U	0.5		2008		Grand Island		
NY	PWS 150	Silver	202801	C8F270351001	0.5	0.25	mg/L	U	0.5		2008		Lackawanna		
NE	PWS 150	Silver	512701	C8H010316001	0.5	0.25	mg/L	U	0.5		2008		Omaha		
NC	PWS 150	Silver	317101	C8H060186001	0.5	0.25	mg/L	U	0.5		2008		Raleigh		
NY	PWS 150	Silver	218701	C8E010345001	0.5	0.25	mg/L	U	0.5		2008		Syracuse		
FL	PWS 150	Silver	307902	C8H140244001	0.5	0.25	mg/L	U	0.5		2008		Tallahassee		
OK	PWS 150	Silver	619301	C8H130144001	0.5	0.25	mg/L	U	0.5		2008		Tulsa		
VA	PWS 150	Silver	315501	C8H220293001	0.5	0.25	mg/L	U	0.5		2008		Vinton		
KS	PWS 150	Silver	619501	C8F130240001	0.5	0.25	mg/L	U	0.5		2008		Wichita		
BC	PWS 150	Silver	818306	AR2008 8-183-06-3	0.5	0.25	mg/L	U	0.5		2008		Langley		
AB	PWS 150	Silver	819401	L690481-6	0.5	0.25	mg/L	U	0.5		2008		Nisku		
ID	PWS 150	Tetrachloroethylene	118308	C9D240220001	0.2	0.1	mg/L	U	0.2		2009		Boise	4	0.033
NC	PWS 150	Tetrachloroethylene	303101	C8I230211001	0.25	0.125	mg/L	U	0.25		2008		Charlotte	1	0.051
NY	PWS 150	Tetrachloroethylene	202802	C9D020223001	0.25	0.125	mg/L	U	0.25		2009		Avon	1	0.051
NE	PWS 150	Tetrachloroethylene	506501	C9F100111001	0.25	0.125	mg/L	U	0.25		2009		Grand Island	1	0.0082
NY	PWS 150	Tetrachloroethylene	202801	C9C280117001	0.25	0.125	mg/L	U	0.25		2009		Lackawanna	1	0.051
KS	PWS 150	Tetrachloroethylene	619501	C9F060174001	0.25	0.125	mg/L	U	0.25		2009		Wichita	1	0.0082
NM	PWS 150	Tetrachloroethylene	700801	C7D180253001	0.25	0.125	mg/L	U	0.25		2007		Albuquerque		
NY	PWS 150	Tetrachloroethylene	202802	C7E230210001	0.25	0.125	mg/L	U	0.25		2007		Avon		
NC	PWS 150	Tetrachloroethylene	303101	C7H150248001	0.25	0.125	mg/L	U	0.25		2007		Charlotte		
MO	PWS 150	Tetrachloroethylene	516003	C7G240284001	0.25	0.125	mg/L	U	0.25		2007		St. Charles		
OR	PWS 150	Tetrachloroethylene	714801	C7I220107001	0.25	0.125	mg/L	U	0.25		2007		Clackamas		
NE	PWS 150	Tetrachloroethylene	506501	C8F130243001	0.25	0.125	mg/L	U	0.25		2008		Grand Island		
NY	PWS 150	Tetrachloroethylene	218701	C8E010345001	0.25	0.125	mg/L	U	0.25		2008		Syracuse		
KS	PWS 150	Tetrachloroethylene	619503	C8I180216001	0.5	0.25	mg/L	U	0.5		2008		Dodge City		
NC	PWS 150	Tetrachloroethylene	303102	C9G080306001	0.26	0.26	mg/L		0.25		2009		St. Paul	1	0.0082
KS	PWS 150	Tetrachloroethylene	619503	C9I240366001	0.36	0.36	mg/L		0.25		2009		Dodge City	1	0.051

State	CLIENT ID	PARAMETER	BRANCH ID	LAB SAMPLE ID	RESULT	Ranked Data	UNITS	QUALIFIER	REPORTING LIMIT	Uth	YEAR	Count	City	DILUTION FACTOR	MDL
FL	PWS 150	Tetrachloroethylene	307902	C8H140244001	0.36	0.36	mg/L		0.25		2008		Tallahassee		
OK	PWS 150	Tetrachloroethylene	612401	C9G230261001	0.38	0.38	mg/L		0.25		2009		Oklahoma City	1	0.051
AZ	PWS 150	Tetrachloroethylene	714201	C7H170374001	0.51	0.51	mg/L		0.25		2007		Chandler		
NC	PWS 150	Tetrachloroethylene	303102	C8J020304001	0.7	0.7	mg/L		0.5		2008		St. Paul	2	0.1
VA	PWS 150	Tetrachloroethylene	315501	C8H220293001	0.7	0.7	mg/L		0.25		2008		Vinton		
KS	PWS 150	Tetrachloroethylene	619501	C8F130240001	0.7	0.7	mg/L		0.25		2008		Wichita		
NE	PWS 150	Tetrachloroethylene	512701	C8H010316001	0.84	0.84	mg/L		0.25		2008		Omaha		
OK	PWS 150	Tetrachloroethylene	619301	C7H020363001	0.95	0.95	mg/L		0.25		2007		Tulsa		
NY	PWS 150	Tetrachloroethylene	200401	C9E210293001	0.96	0.96	mg/L		0.25		2009		Cohoes	1	0.051
NC	PWS 150	Tetrachloroethylene	303102	C7G120398001	1.1	1.1	mg/L		0.25		2007		St. Paul		
OK	PWS 150	Tetrachloroethylene	612401	C8I190324001	1.8	1.8	mg/L		0.25		2008		Oklahoma City	1	0.051
NC	PWS 150	Tetrachloroethylene	306401	C9D160222001	2	2	mg/L		0.25		2009		Archdale	1	0.0082
OR	PWS 150	Tetrachloroethylene	714801	C9H150188001	2.7	2.7	mg/L		0.25		2009		Clackamas	1	0.051
NY	PWS 150	Tetrachloroethylene	202802	C9C310110001	3	3	mg/L		0.25		2009		Avon	1	0.051
VA	PWS 150	Tetrachloroethylene	312101	C9I250178001	4.8	4.8	mg/L		0.25		2009		Chesapeake	1	0.051
AZ	PWS 150	Tetrachloroethylene	714201	C9H050287001	9	9	mg/L		0.25		2009		Chandler	1	0.051
KS	PWS 150	Tetrachloroethylene	619503	C7H060166001	23	23	mg/L		0.25		2007		Dodge City		
OK	PWS 150	Tetrachloroethylene	612401	C7H160264001	37	37	mg/L		0.25		2007		Oklahoma City		
BC	PWS 150	Tetrachloroethylene	818306	AR2008 8-183-06-3	100	50	mg/L	U	100		2008		Langley		
AB	PWS 150	Tetrachloroethylene	819401	L690481-6	100	50	mg/L	U	100		2008		Nisku		
NY	PWS 150	Tetrachloroethylene	218701	C9C280112001R2	69	69	mg/L		2.5	37	2009	61	Syracuse	10	0.51
VT	PWS 150	Tetrachloroethylene	210501	C8G170336001	110	110	mg/L		2.5		2008		Barre		
NE	PWS 150	Tetrachloroethylene	506501	C7G260212001	120	120	mg/L		5		2007		Grand Island		
KS	PWS 150	Tetrachloroethylene	619501	C7G030446001	160	160	mg/L		5		2007		Wichita		
AZ	PWS 150	Tetrachloroethylene	714201	C8G310254001R2	200	200	mg/L		5		2008		Chandler		
NY	PWS 150	Tetrachloroethylene	200401	C7F260261001	300	300	mg/L		25		2007		Cohoes		
OK	PWS 150	Tetrachloroethylene	619301	C8H130144001R2	310	310	mg/L		25		2008		Tulsa		
NC	PWS 150	Tetrachloroethylene	306401	C7G110239001	600	600	mg/L		25		2007		High Point		
NC	PWS 150	Tetrachloroethylene	306401	C7G110239001R2	600	600	mg/L		25		2007		Archdale		
NY	PWS 150	Tetrachloroethylene	200401	C8E020248001	640	640	mg/L		50		2008		Cohoes		
NC	PWS 150	Tetrachloroethylene	317101	C8H060186001	640	640	mg/L		50		2008		Raleigh		
NC	PWS 150	Tetrachloroethylene	306401	C8E300315001	860	860	mg/L		50		2008		Archdale		
OR	PWS 150	Tetrachloroethylene	714801	C8H010298001R2	1300	1300	mg/L		50		2008		Clackamas		
NC	PWS 150	Tetrachloroethylene	317101	C9F120357001	1900	1900	mg/L		0.25		2009		Raleigh	1	0.051
ID	PWS 150	Tetrachloroethylene	118308	C8D290257001	1900	1900	mg/L		50		2008		Boise		
NY	PWS 150	Tetrachloroethylene	202802	C8D300152001	2000	2000	mg/L		50		2008		Avon		
VT	PWS 150	Tetrachloroethylene	210501	C9E210297001R2	5200	5200	mg/L		50		2009		Barre	200	10
ID	PWS 150	Tetrachloroethylene	118308	C7F060245001	5500	5500	mg/L		250		2007		Boise		
NY	PWS 150	Tetrachloroethylene	202801	C7F210325001R2	5500	5500	mg/L		250		2007		Lackawanna		
VA	PWS 150	Tetrachloroethylene	315401	C8I160286001R2	6200	6200	mg/L		500		2008		Chester		
NE	PWS 150	Tetrachloroethylene	512701	C7H170363001	6300	6300	mg/L		200		2007		Omaha		
NY	PWS 150	Tetrachloroethylene	218701	C7F150407001	8800	8800	mg/L		250		2007		Syracuse		
NC	PWS 150	Tetrachloroethylene	317101	C9F120357001R2	17000	17000	mg/L		250		2009		Raleigh	1000	51
VA	PWS 150	Tetrachloroethylene	312101	C8I100158001R2	64000	64000	mg/L		500		2008		Chesapeake		
NY	PWS 150	Tetrachloroethylene	202801	C8F270351001	75000	75000	mg/L		2000		2008		Lackawanna		
NC	PWS 150	Trichloroethylene	303101	C8I230211001	0.25	0.125	mg/L	U	0.25		2008		Charlotte	1	0.048
OK	PWS 150	Trichloroethylene	612401	C8I190324001	0.25	0.125	mg/L	U	0.25		2008		Oklahoma City	1	0.048
NC	PWS 150	Trichloroethylene	306401	C9D160222001	0.25	0.125	mg/L	U	0.25		2009		Archdale	1	0.008
NY	PWS 150	Trichloroethylene	202802	C9D020223001	0.25	0.125	mg/L	U	0.25		2009		Avon	1	0.048
VT	PWS 150	Trichloroethylene	210501	C9E210297001	0.25	0.125	mg/L	U	0.25		2009		Barre	1	0.048
AZ	PWS 150	Trichloroethylene	714201	C9H050287001	0.25	0.125	mg/L	U	0.25		2009		Chandler	1	0.048
VA	PWS 150	Trichloroethylene	312101	C9I250178001	0.25	0.125	mg/L	U	0.25		2009		Chesapeake	1	0.048
OR	PWS 150	Trichloroethylene	714801	C9H150188001	0.25	0.125	mg/L	U	0.25		2009		Clackamas	1	0.048
NY	PWS 150	Trichloroethylene	200401	C9E210293001	0.25	0.125	mg/L	U	0.25		2009		Cohoes	1	0.048
KS	PWS 150	Trichloroethylene	619503	C9I240366001	0.25	0.125	mg/L	U	0.25		2009		Dodge City	1	0.048
NE	PWS 150	Trichloroethylene	506501	C9F100111001	0.25	0.125	mg/L	U	0.25		2009		Grand Island	1	0.008
OK	PWS 150	Trichloroethylene	612401	C9G230261001	0.25	0.125	mg/L	U	0.25		2009		Oklahoma City	1	0.048
NC	PWS 150	Trichloroethylene	317101	C9F120357001	0.25	0.125	mg/L	U	0.25		2009		Raleigh	1	0.048
NC	PWS 150	Trichloroethylene	303102	C9G080306001	0.25	0.125	mg/L	U	0.25		2009		St. Paul	1	0.008
NY	PWS 150	Trichloroethylene	218701	C9C280112001	0.25	0.125	mg/L	U	0.25		2009		Syracuse	1	0.048
KS	PWS 150	Trichloroethylene	619501	C9F060174001	0.25	0.125	mg/L	U	0.25		2009		Wichita	1	0.008
NM	PWS 150	Trichloroethylene	700801	C7D180253001	0.25	0.125	mg/L	U	0.25		2007		Albuquerque		
NY	PWS 150	Trichloroethylene	202802	C7E230210001	0.25	0.125	mg/L	U	0.25		2007		Avon		
ID	PWS 150	Trichloroethylene	118308	C7F060245001	0.25	0.125	mg/L	U	0.25		2007		Boise		
AZ	PWS 150	Trichloroethylene	714201	C7H170374001	0.25	0.125	mg/L	U	0.25		2007		Chandler		
NC	PWS 150	Trichloroethylene	303101	C7H150248001	0.25	0.125	mg/L	U	0.25		2007		Charlotte		

State	CLIENT ID	PARAMETER	BRANCH ID	LAB SAMPLE ID	RESULT	Ranked Data	UNITS	QUALIFIER	REPORTING LIMIT	Uth	YEAR	Count	City	DILUTION FACTOR	MDL
KS	PWS 150	Trichloroethylene	619503	C7H060166001	0.25	0.125	mg/L	U	0.25		2007		Dodge City		
NE	PWS 150	Trichloroethylene	506501	C7G260212001	0.25	0.125	mg/L	U	0.25		2007		Grand Island		
NC	PWS 150	Trichloroethylene	306401	C7G110239001	0.25	0.125	mg/L	U	0.25		2007		High Point		
OK	PWS 150	Trichloroethylene	612401	C7H160264001	0.25	0.125	mg/L	U	0.25		2007		Oklahoma City		
NE	PWS 150	Trichloroethylene	512701	C7H170363001	0.25	0.125	mg/L	U	0.25		2007		Omaha		
MO	PWS 150	Trichloroethylene	516003	C7G240284001	0.25	0.125	mg/L	U	0.25		2007		St. Charles		
NC	PWS 150	Trichloroethylene	303102	C7G120398001	0.25	0.125	mg/L	U	0.25		2007		St. Paul		
NY	PWS 150	Trichloroethylene	218701	C7F150407001	0.25	0.125	mg/L	U	0.25		2007		Syracuse		
OK	PWS 150	Trichloroethylene	619301	C7H020363001	0.25	0.125	mg/L	U	0.25		2007		Tulsa		
NY	PWS 150	Trichloroethylene	202801	C7F210325001	0.25	0.125	mg/L	U	0.25		2007		Lackawanna		
NC	PWS 150	Trichloroethylene	306401	C7G110239001	0.25	0.125	mg/L	U	0.25		2007		Archdale		
OR	PWS 150	Trichloroethylene	714801	C7I220107001	0.25	0.125	mg/L	U	0.25		2007		Clackamas		
NC	PWS 150	Trichloroethylene	306401	C8E300315001	0.25	0.125	mg/L	U	0.25		2008		Archdale		
NY	PWS 150	Trichloroethylene	202802	C8D300152001	0.25	0.125	mg/L	U	0.25		2008		Avon		
ID	PWS 150	Trichloroethylene	118308	C8D290257001	0.25	0.125	mg/L	U	0.25		2008		Boise		
AZ	PWS 150	Trichloroethylene	714201	C8G310254001	0.25	0.125	mg/L	U	0.25	37	2008	60	Chandler		
VA	PWS 150	Trichloroethylene	315401	C8I160286001	0.25	0.125	mg/L	U	0.25		2008		Chester		
NE	PWS 150	Trichloroethylene	506501	C8F130243001	0.25	0.125	mg/L	U	0.25		2008		Grand Island		
NY	PWS 150	Trichloroethylene	202801	C8F270351001	0.25	0.125	mg/L	U	0.25		2008		Lackawanna		
NE	PWS 150	Trichloroethylene	512701	C8H010316001	0.25	0.125	mg/L	U	0.25		2008		Omaha		
NY	PWS 150	Trichloroethylene	218701	C8E010345001	0.25	0.125	mg/L	U	0.25		2008		Syracuse		
FL	PWS 150	Trichloroethylene	307902	C8H140244001	0.25	0.125	mg/L	U	0.25		2008		Tallahassee		
VA	PWS 150	Trichloroethylene	315501	C8H220293001	0.25	0.125	mg/L	U	0.25		2008		Vinton		
KS	PWS 150	Trichloroethylene	619501	C8F130240001	0.25	0.125	mg/L	U	0.25		2008		Wichita		
NC	PWS 150	Trichloroethylene	303102	C8J020304001	0.5	0.25	mg/L	U	0.5		2008		St. Paul	2	0.095
KS	PWS 150	Trichloroethylene	619503	C8I180216001	0.5	0.25	mg/L	U	0.5		2008		Dodge City		
NY	PWS 150	Trichloroethylene	202801	C9C280117001	0.5	0.5	mg/L		0.25		2009		Lackawanna	1	0.048
NC	PWS 150	Trichloroethylene	317101	C8H060186001	0.56	0.56	mg/L		0.25		2008		Raleigh		
VA	PWS 150	Trichloroethylene	312101	C8I100158001	1.2	1.2	mg/L		0.25		2008		Chesapeake		
NY	PWS 150	Trichloroethylene	200401	C8E020248001	1.6	1.6	mg/L		0.25		2008		Cohoes		
ID	PWS 150	Trichloroethylene	118308	C9D240220001	4.9	4.9	mg/L		0.2		2009		Boise	4	0.032
VT	PWS 150	Trichloroethylene	210501	C8G170336001	4.9	4.9	mg/L		0.25		2008		Barre		
KS	PWS 150	Trichloroethylene	619501	C7G030446001	7.6	7.6	mg/L		0.25		2007		Wichita		
OK	PWS 150	Trichloroethylene	619301	C8H130144001	11	11	mg/L		0.25		2008		Tulsa		
NY	PWS 150	Trichloroethylene	200401	C7F260261001	28	28	mg/L		0.25		2007		Cohoes		
BC	PWS 150	Trichloroethylene	818306	AR2008 8-183-06-3	100	50	mg/L	U	100		2008		Langley		
AB	PWS 150	Trichloroethylene	819401	L690481-6	100	50	mg/L	U	100		2008		Nisku		
NY	PWS 150	Trichloroethylene	202802	C9C310110001R2	83	83	mg/L		2.5		2009		Avon	10	0.48
OR	PWS 150	Trichloroethylene	714801	C8H010298001R2	200	200	mg/L		50		2008		Clackamas		
NC	PWS 150	Vinyl Chloride	303101	C8I230211001	0.1	0.05	mg/L	U	0.1		2008		Charlotte	1	0.07
OK	PWS 150	Vinyl Chloride	612401	C8I190324001	0.1	0.05	mg/L	U	0.1		2008		Oklahoma City	1	0.07
NC	PWS 150	Vinyl Chloride	306401	C9D160222001	0.1	0.05	mg/L	U	0.1		2009		Archdale	1	0.013
NY	PWS 150	Vinyl Chloride	202802	C9C310110001	0.1	0.05	mg/L	U	0.1		2009		Avon	1	0.07
NY	PWS 150	Vinyl Chloride	202802	C9D020223001	0.1	0.05	mg/L	U	0.1		2009		Avon	1	0.07
VT	PWS 150	Vinyl Chloride	210501	C9E210297001	0.1	0.05	mg/L	U	0.1		2009		Barre	1	0.07
AZ	PWS 150	Vinyl Chloride	714201	C9H050287001	0.1	0.05	mg/L	U	0.1		2009		Chandler	1	0.07
VA	PWS 150	Vinyl Chloride	312101	C9I250178001	0.1	0.05	mg/L	U	0.1		2009		Chesapeake	1	0.07
OR	PWS 150	Vinyl Chloride	714801	C9H150188001	0.1	0.05	mg/L	U	0.1		2009		Clackamas	1	0.07
NY	PWS 150	Vinyl Chloride	200401	C9E210293001	0.1	0.05	mg/L	U	0.1		2009		Cohoes	1	0.07
KS	PWS 150	Vinyl Chloride	619503	C9I240366001	0.1	0.05	mg/L	U	0.1		2009		Dodge City	1	0.07
NE	PWS 150	Vinyl Chloride	506501	C9F100111001	0.1	0.05	mg/L	U	0.1		2009		Grand Island	1	0.013
NY	PWS 150	Vinyl Chloride	202801	C9C280117001	0.1	0.05	mg/L	U	0.1		2009		Lackawanna	1	0.07
OK	PWS 150	Vinyl Chloride	612401	C9G230261001	0.1	0.05	mg/L	U	0.1		2009		Oklahoma City	1	0.07
NC	PWS 150	Vinyl Chloride	317101	C9F120357001	0.1	0.05	mg/L	U	0.1		2009		Raleigh	1	0.07
NC	PWS 150	Vinyl Chloride	303102	C9G080306001	0.1	0.05	mg/L	U	0.1		2009		St. Paul	1	0.013
NY	PWS 150	Vinyl Chloride	218701	C9C280112001	0.1	0.05	mg/L	U	0.1		2009		Syracuse	1	0.07
KS	PWS 150	Vinyl Chloride	619501	C9F060174001	0.1	0.05	mg/L	U	0.1		2009		Wichita	1	0.013
NM	PWS 150	Vinyl Chloride	700801	C7D180253001	0.1	0.05	mg/L	U	0.1		2007		Albuquerque		
NY	PWS 150	Vinyl Chloride	202802	C7E230210001	0.1	0.05	mg/L	U	0.1		2007		Avon		
ID	PWS 150	Vinyl Chloride	118308	C7F060245001	0.1	0.05	mg/L	U	0.1		2007		Boise		
AZ	PWS 150	Vinyl Chloride	714201	C7H170374001	0.1	0.05	mg/L	U	0.1		2007		Chandler		
NC	PWS 150	Vinyl Chloride	303101	C7H150248001	0.1	0.05	mg/L	U	0.1		2007		Charlotte		
NY	PWS 150	Vinyl Chloride	200401	C7F260261001	0.1	0.05	mg/L	U	0.1		2007		Cohoes		
KS	PWS 150	Vinyl Chloride	619503	C7H060166001	0.1	0.05	mg/L	U	0.1		2007		Dodge City		
NE	PWS 150	Vinyl Chloride	506501	C7G260212001	0.1	0.05	mg/L	U	0.1		2007		Grand Island		
NC	PWS 150	Vinyl Chloride	306401	C7G110239001	0.1	0.05	mg/L	U	0.1		2007		High Point		

State	CLIENT ID	PARAMETER	BRANCH ID	LAB SAMPLE ID	RESULT	Ranked Data	UNITS	QUALIFIER	REPORTING LIMIT	Uth	YEAR	Count	City	DILUTION FACTOR	MDL
OK	PWS 150	Vinyl Chloride	612401	C7H160264001	0.1	0.05	mg/L	U	0.1		2007		Oklahoma City		
NE	PWS 150	Vinyl Chloride	512701	C7H170363001	0.1	0.05	mg/L	U	0.1		2007		Omaha		
MO	PWS 150	Vinyl Chloride	516003	C7G240284001	0.1	0.05	mg/L	U	0.1		2007		St. Charles		
NC	PWS 150	Vinyl Chloride	303102	C7G120398001	0.1	0.05	mg/L	U	0.1		2007		St. Paul		
NY	PWS 150	Vinyl Chloride	218701	C7F150407001	0.1	0.05	mg/L	U	0.1		2007		Syracuse		
OK	PWS 150	Vinyl Chloride	619301	C7H020363001	0.1	0.05	mg/L	U	0.1		2007		Tulsa		
KS	PWS 150	Vinyl Chloride	619501	C7G030446001	0.1	0.05	mg/L	U	0.1		2007		Wichita		
NY	PWS 150	Vinyl Chloride	202801	C7F210325001	0.1	0.05	mg/L	U	0.1		2007		Lackawanna		
NC	PWS 150	Vinyl Chloride	306401	C7G110239001	0.1	0.05	mg/L	U	0.1		2007		Archdale		
OR	PWS 150	Vinyl Chloride	714801	C7I220107001	0.1	0.05	mg/L	U	0.1	37	2007	60	Clackamas		
NC	PWS 150	Vinyl Chloride	306401	C8E300315001	0.1	0.05	mg/L	U	0.1		2008		Archdale		
NY	PWS 150	Vinyl Chloride	202802	C8D300152001	0.1	0.05	mg/L	U	0.1		2008		Avon		
VT	PWS 150	Vinyl Chloride	210501	C8G170336001	0.1	0.05	mg/L	U	0.1		2008		Barre		
ID	PWS 150	Vinyl Chloride	118308	C8D290257001	0.1	0.05	mg/L	U	0.1		2008		Boise		
AZ	PWS 150	Vinyl Chloride	714201	C8G310254001	0.1	0.05	mg/L	U	0.1		2008		Chandler		
VA	PWS 150	Vinyl Chloride	312101	C8I100158001	0.1	0.05	mg/L	U	0.1		2008		Chesapeake		
VA	PWS 150	Vinyl Chloride	315401	C8I160286001	0.1	0.05	mg/L	U	0.1		2008		Chester		
OR	PWS 150	Vinyl Chloride	714801	C8H010298001	0.1	0.05	mg/L	U	0.1		2008		Clackamas		
NY	PWS 150	Vinyl Chloride	200401	C8E020248001	0.1	0.05	mg/L	U	0.1		2008		Cohoes		
NE	PWS 150	Vinyl Chloride	506501	C8F130243001	0.1	0.05	mg/L	U	0.1		2008		Grand Island		
NY	PWS 150	Vinyl Chloride	202801	C8F270351001	0.1	0.05	mg/L	U	0.1		2008		Lackawanna		
NE	PWS 150	Vinyl Chloride	512701	C8H010316001	0.1	0.05	mg/L	U	0.1		2008		Omaha		
NC	PWS 150	Vinyl Chloride	317101	C8H060186001	0.1	0.05	mg/L	U	0.1		2008		Raleigh		
NY	PWS 150	Vinyl Chloride	218701	C8E010345001	0.1	0.05	mg/L	U	0.1		2008		Syracuse		
FL	PWS 150	Vinyl Chloride	307902	C8H140244001	0.1	0.05	mg/L	U	0.1		2008		Tallahassee		
OK	PWS 150	Vinyl Chloride	619301	C8H130144001	0.1	0.05	mg/L	U	0.1		2008		Tulsa		
VA	PWS 150	Vinyl Chloride	315501	C8H220293001	0.1	0.05	mg/L	U	0.1		2008		Vinton		
KS	PWS 150	Vinyl Chloride	619501	C8F130240001	0.1	0.05	mg/L	U	0.1		2008		Wichita		
NC	PWS 150	Vinyl Chloride	303102	C8J020304001	0.2	0.1	mg/L	U	0.2		2008		St. Paul	2	0.14
ID	PWS 150	Vinyl Chloride	118308	C9D240220001	0.2	0.1	mg/L	U	0.2		2009		Boise	4	0.052
KS	PWS 150	Vinyl Chloride	619503	C8I180216001	0.2	0.1	mg/L	U	0.2		2008		Dodge City		
BC	PWS 150	Vinyl Chloride	818306	AR2008 8-183-06-3	100	50	mg/L	U	100		2008		Langley		
AB	PWS 150	Vinyl Chloride	819401	L690481-6	100	50	mg/L	U	100		2008		Nisku		

Appendix I-D

Annual Re-characterization Statistical Model

Statistical Analysis of Annual Waste Characterization Data

Prepared by
Robert D. Gibbons Ph.D.

for

Safety Kleen
July 23, 1998

1 Introduction

Since 1990, Safety-Kleen has undertaken a major analytical study each year to document the contaminants in some of its most common waste streams to determine which TCLP waste codes should appear on the manifest for that waste. This Annual Waste Recharacterization Program is both expensive and extensive. Upon review, it appeared that regulatory agency instructions for how to interpret the data might not have been in line with current policy, as reflected in SW846. The general approach is based on development of an upper 90% confidence limit[1] for the true concentration of each constituent, which can in turn be directly compared to regulatory standards to determine if the waste code should or should not be added to a particular waste stream (e.g., Premium Gold Parts Washer Solvent 150). The regulatory basis for this type of comparison stems from U.S. EPA SW846 Chapter 9 (September 1986) guidance on determining if a waste stream is hazardous.[2] The primary complicating feature is the presence of large numbers of nondetects which raises serious question regarding the use of the parametric approach. In light of this concern, nonparametric methods are used throughout.[3] Specifically, following U.S. EPA SW846, we construct a nonparametric 90% upper confidence limit (UCL) for the 50^{th} percentile of the distribution (i.e., median), which is equivalent to the 90% UCL for the mean in the case of a symmetric distribution such as the normal distribution.

[1]"Consequently, the CI employed to evaluate solid wastes is, for all practical purposes, a 90% interval." U.S. EPA SW846 (1986) chapter 9 page 6.

[2]"The upper limit of the CI for μ is compared with the applicable regulatory threshold (RT) to determine if a solid waste contains the variable (chemical contaminant) of concern at a hazardous level. The contaminant of concern is not considered to be present in the waste at a hazardous level if the upper limit of the CI is less than the applicable RT. Otherwise the opposite conclusion is reached. "U.S. EPA SW846 (1986) chapter 9 page 3

[3]"If the data do not adequately follow the normal distribution even after logarithm transformation, a nonparametric confidence interval can be constructed. This interval is for the median concentration (which equals the mean if the distribution is symmetric)." U.S. EPA Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, April 1989, page 6-8

2 Method

Following Chapter 9 of SW846, the 90% UCL for the mean concentration obtained from a series of *n* representative samples is to be compared to the appropriate regulatory standard to determine if the waste stream is hazardous. If the UCL exceeds the standard, the waste stream is considered hazardous. The applicant must compute the UCL that is appropriate for the specific distributional form of the data. Given the large number of nondetects for many of the constituents, it is difficult if not impossible to clearly identify the underlying distributional form of the data. In this case, the U.S. EPA guidance indicates that a nonparametric alternative should be used.[4]

Nonparametric confidence limits are derived as follows. Given an unknown *P* x 100th percentile of interest (e.g. the 50th percentile or median),[5] where *P* is between 0 and 1, and *n* concentration measurements, the probability that any randomly selected concentration measurements being less than the *P* x 100th percentile is simply *P* and the probability of exceeding the *P* x 100th percentile is 1 - *P*. In light of this, the number of sample values falling below the *P* x 100th percentile out of a set of *n* measurements follows a Binomial distribution with parameters *n* and *P*.

The connection with the Binomial distribution can be used to determine an interval formed by a given pair of order statistics (i.e. ranked values) that will contain the percentile of interest, in this case the 50th percentile. Similarly, the Binomial distribution can also be used in constructing an upper limit (i.e. one-sided) for the percentile (e.g. a 90% upper confidence limit for the 50th percentile of the distribution). The computational formula for the cumulative binomial distribution $B(x;n,p)$, representing the probability of getting *x* or fewer successes in *n* trials with success probability *p* is given by

$$Bin(x;n,p) \equiv \sum_{i=0}^{x} \binom{n}{i} p^{i} (1-p)^{n-i}$$

To draw inference regarding the P = 50th percentile, we set $p = .5$ in the previous equation. For a one-sided UCL we compute

$$1-\alpha = 1 - Bin(U-1;n,.5)$$

beginning from the sample median. We then increase *U* by one until in this case 1 - α is equal to at least .90. The smallest value of *U* that provides 1 - α ≥ .9 is then the order statistic (i.e., ranked value) that is the nonparametric 90% UCL for the 50th percentile of the distribution.

[4] "If the data do not adequately follow the normal distribution even after logarithm transformation, a nonparametric confidence interval can be constructed." U.S. EPA, 1989

[5] "This interval is for the median concentration (which equals the mean if the distribution is symmetric)." U.S. EPA (1989), page 6-8

3 Illustration

Consider the following most recent 50 data values for PCE (D039) obtained from Premium Gold Parts Washer Solvent-150.

Table 1
Premium Gold Parts Washer Solvent - 150
50 most recent samples in order of increasing concentration
in ppm

<50.000	<1.000	<0.100	<0.100	<0.100
<0.100	<0.100	<0.100	<0.100	<0.100
<0.100	0.110	0.200	0.200	0.220
0.230	0.260	0.510	0.870	0.880
1.000	1.300	1.500	1.800	2.000
2.700	2.700	3.300	5.400	7.000
7.100	12.000	12.300	17.200	19.700
20.000	20.000	21.200	23.600	32.300
51.100	52.500	136.000	211.000	286.000
508.000	635.000	771.000	940.000	2810.000

For n =50, p =.5 and 1 - α = .9, we find that U = 31 is the smallest order statistic that provides 90% confidence or more (1 - α = .941). As such, we select the 31st largest value in Table 1 which is 7.1 ppm as our UCL. Since 7.1 ppm is larger than the standard of 0.7 ppm, then the D039 waste code is required for this waste stream.

4 Conclusion

The data in the following package have been interpreted using the methodology described. The waste codes for each stream were determined as those parameters for which the 90% UCL for the median concentration was above the regulatory limit, based on review of the last two years of samples or the most recent 50 samples, whichever yielded the larger number of samples to consider.

SAFETY-KLEEN SYSTEMS, INC.
SYRACUSE, NY SERVICE CENTER
EPA ID No. NYD 982743312

ATTACHMENT II

INSPECTION PLAN

ATTACHMENT II

INSPECTION PLAN

ABSTRACT

Purpose: To ensure a safe and compliant operation, the Syracuse facility will conduct a series of site-specific inspections. The purpose of this plan is to define the type and frequency of these site-specific inspections.

ATTACHMENT II - INSPECTION PLAN

1.0 INSPECTION PROGRAM

The branch (i.e., Service Center) manager or his designee is responsible for carrying out and documenting the facility inspection on a daily operating basis. He will note any repairs that are needed and assure that they are completed. If the repairs cannot be done by facility personnel Safety-Kleen's Corporate headquarters will be notified for assistance. Completion of repairs will also be noted on the facility inspection record.

Inspection of the 20,000-gallon hazardous waste storage tank and container storage area will take place each operating day. Inspection of the safety and security equipment will be conducted weekly. Attached are examples of the records used to document these inspections (see Appendix II - A). The format of these records may change or be modified as necessary; changes in content will require a permit modification.

An inspection record file for the hazardous waste management units and safety/security equipment will be maintained at the Service Center for a period of at least 3 years.

The facility inspection record file will be reviewed on a quarterly basis to ensure that the inspections are properly completed and that any necessary repairs have been completed.

The facility inspection includes the following:

A. Tank Inspections--At a minimum, the tank holding the spent parts washer solvents is inspected each operating day. The inspection includes checks of the high level alarm, any releases and of the volume held in the tank. Sudden deviations in the solvent volume are investigated and their cause determined. If necessary, repairs will be initiated immediately. When the tank used to store spent solvent is 85% full, a pickup is scheduled. The fluid level will not exceed 95% of the tank volume at any time or an alarm will sound.

   The secondary containment for the tank is checked for cracks or other deterioration. Any damage to the tank (such as rust or loose fixtures) or secondary containment system will be noted and repairs initiated.

B. Solvent Dispensing Equipment Inspections - The solvent dispensing hoses, connections and valves will be inspected for damage (such as cracks or leaks) and proper functioning. The pumps, pipes and fittings will also be checked for damage and proper functioning. Any damage to the solvent dispensing equipment will be noted and repaired.

C. Return and Fill Station/Drum Washer Inspection: The Return and Fill station/drum washer is inspected each working day for leaks and sediment buildup. Any leaks are noted and repaired promptly. Excess sediment is removed from the dumpsters. The condition of seals and brushes is checked.

D. Safety Equipment Inspections: The fire extinguishers will be checked to ensure that the units are charged and accessible. In addition, the operation of the eyewash units is confirmed and the first aid kit, sorbents and decontamination equipment are inspected for adequate content and accessibility. The communications system, consisting of the branch telephones (with loudspeakers), –is used every day and is known to be in working condition.

E. Security Inspection: The operation of each gate and lock is inspected. In addition, the fence will be inspected for deterioration on a weekly basis.

F. Container Inspections: At a minimum, the parts washer containers stored at the facility in the permitted container storage area of the warehouse will be inspected each operating day. The inspections include checks of the storage capacity, integrity of containers, integrity of secondary containment, and aisle space.

The drum storage area is inspected daily and the number and condition of the drums noted. The total volume of the spent parts washer solvent and other bulk liquids held in the drum storage area will not exceed ten times the amount that can be collected in the secondary containment. The drums will be checked for proper labels and markings in accordance with US DOT and NYSDEC hazardous waste regulations. The secondary containment is inspected for deterioration of coating, cracks, and failures. If cracks or failure are noted, they are repaired immediately.

G. Annual inspection: The secondary containment system will be inspected by an independent NYS registered professional engineer who is qualified to evaluate the condition of the concrete. All surfaces will be completely exposed where possible and inspected for cracks, failed joint filler, welding or sealant, differential settlement, and any other defects which may decrease the relative impermeability of the containment areas or reduce the effectiveness of collecting spilled waste or storm water. The engineer will prepare a detailed report which specifies the nature and content of the inspection, observations made, details of any defects found (including photographs, if needed to fully describe the defects) evaluate the adequacy of any repairs made during the year, provide details of any remedial action taken (including methods, procedures, and material specifications) and certify that all repairs made in response to the inspections were made in accordance with descriptions contained within the report. The report will be submitted to NYSDEC. The maintenance needs (e.g. re-application of coating) will be determined by the department based upon the results of this inspection.

APPENDIX II - A

Inspection Forms

INSPECTION LOG SHEETS FOR:

DAILY INSPECTION OF SPENT SOLVENT STORAGE TANK SYSTEM (1)

Weekday	Monday	Tuesday	Wednesday	Thursday	Friday
Name					
Date (m/d/yr)					
Time					
Volume in Tank (gallons)					

STORAGE TANK: (*TANK MUST NEVER BE MORE THAN 95% FULL*)

	Mon.	Tues.	Wed.	Thurs.	Fri.
Tank Exterior:	A N	A N	A N	A N	A N

If AN@ circle appropriate problem; rusty or loose anchoring, lack of grounding, wet spots, discoloration, leaks, distortion, paint condition, other____

Tank Signs:	A N	A N	A N	A N	A N

If AN@ circle appropriate problem; Missing, illegible, deteriorated, other______________________________

High Level Alarms	A N	A N	A N	A N	A N

If AN@, circle appropriate problem: malfunctioning APower On Light@, malfunctioning siren/strobe light, other____________________

Volume Gauges:	A N	A N	A N	A N	A N

If AN@, circle appropriate problem: disconnected, sticking, condensation, other ______________________________

Rigid Piping and Supports	A N	A N	A N	A N	A N

If AN@, circle appropriate problem: distortion, corrosion, paint failure, leaks, other:______________________________

CONTAINMENT AREAS

Any material which spills, leaks, or otherwise accumulates in the dike, including rainwater, or any accumulated dirt must be completely removed within 24 hours.

Tank Dike Box	A N	A N	A N	A N	A N

If AN@, circle appropriate problem; cracks, liquid/debris in dike, rust, pitting, chipping, deterioration, leaks, paint condition, fire suppression, other:____

Rain Shields	A N	A N	A N	A N	A N

If AN@, circle appropriate problem; cracks, poor seal, paint, other________________________________

Valve Access Box	A	N	A	N	A	N	A	N	A	N

If AN@, describe appropriate problem: missing camlock caps, dirty sorbents, spills, leaks, other________________________

Truck Pad	A	N	A	N	A	N	A	N	A	N

If AN@, describe problem: Liquid or debris in trench, cracks, waste residue, other________________________

OBSERVATIONS, COMMENTS, DATE AND NATURE OF REPAIRS OF ANY ITEMS INDICATED AS NOT ACCEPTABLE

____
____
____
____
____

INSPECTION LOG SHEETS FOR:

DAILY INSPECTION OF STORAGE TANK SYSTEM (2)

Weekday	Monday	Tuesday	Wednesday	Thursday	Friday
Name					
Date (m/d/yr)					
Time					

TRANSFER PUMPS AND HOSES Mon. Tue. Wed. Thurs. Fri.

Pump Seals: A N A N A N A N A N

If AN@, circle appropriate problem: leaks, other____

Motors: A N A NA N A N A N

If AN@, circle appropriate problem: overheating, other ____

Fittings: A N A N A N A N A N

If AN@, circle appropriate problem: leaks, other____

Valves: A N A N A N A N A N

If AN@, circle appropriate problem: leaks, sticking, other____

Hose Connections and Fittings: A N A N A N A N A N

If AN@, circle appropriate problem: cracked, loose, leaks, other____

Hose Body: A N A N A N A N A N

If AN@, circle appropriate problem: crushed, thin spots, leaks, other____

RETURN AND FILL STATION

Wet Dumpsters: A N A N A N A N A N

If AN@, circle appropriate problem: sediment buildup, leaks, rust, split seams, spray and debris seals, door, liquid level, micro switch, other________________________

Ventilation Fans A N A N A N A N A N

If AN@, circle appropriate problem: inoperative, shutters jammed, other______________________________

Secondary Containment: A N A N A N A N A N

If AN@, circle appropriate problem: sediment/liquid, leaks, deterioration, distortion, excess debris, other______________________________

Loading/Unloading Area: A N A N A N A N A N

If AN@, circle appropriate problem: cracks, ponding/wet spots, deterioration, other______________________________

Satellite Accumulation Containers A N A N A N A N A N

If AN@, circle appropriate problem: labels, closure, other______________________________

OBSERVATIONS, COMMENTS, DATE AND NATURE OF REPAIRS OF ANY ITEMS INDICATED AS NOT ACCEPTABLE:

____
____
____
____
____

INSPECTION LOG SHEETS FOR:

DAILY INSPECTION OF SUBPART BB EQUIPMENT

Weekday	Monday	Tuesday	Wednesday	Thursday	Friday
Name					
Date (m/d/yr)					
Time					

Tag Number/Description	Mon	Tue	Wed	Thur	Fri
1 Ball valve, 1.5"	A N	A N	A N	A N	A N
2 Gate valve, 2"	A N	A N	A N	A N	A N
3 Ball valve, 1.5"	A N	A N	A N	A N	A N
4 Recirculating pump	A N	A N	A N	A N	A N
5 Ball valve, 1.5"	A N	A N	A N	A N	A N
6 Ball valve, 1.5"	A N	A N	A N	A N	A N
7 Gate valve, 2"	A N	A N	A N	A N	A N
8 Recirculating pump	A N	A N	A N	A N	A N

9 Flanged ball valve, 2"	A N	A N	A N	A N	A N
10 Flanged ball valve, 2"	A N	A N	A N	A N	A N
11 Flanged ball valve, 2"	A N	A N	A N	A N	A N
12 Strainer assembly	A N	A N	A N	A N	A N
13 Spent solvent pump	A N	A N	A N	A N	A N
14 Flanged check valve, 2"	A N	A N	A N	A N	A N
15 Automatic vacuum breaker, 3/8"	A N	A N	A N	A N	A N
16 Flanged check valve, 3"	A N	A N	A N	A N	A N
17 Flanged ball valve, 3"	A N	A N	A N	A N	A N
18 Flanged camlock, 3"	A N	A N	A N	A N	A N
22 Suction/fill line assembly	A N	A N	A N	A N	A N
23 Blind flange*	A N	A N	A N	A N	A N
24 Manway and flange assembly*	A N	A N	A N	A N	A N
25 Loose bolt manway*	A N	A N	A N	A N	A N
26 Flange*	A N	A N	A N	A N	A N
27 Flange*	A N	A N	A N	A N	A N
28 Flange*	A N	A N	A N	A N	A N
29 Flange*	A N	A N	A N	A N	A N
30 Fill line assembly	A N	A N	A N	A N	A N
31 Vent assembly*	A N	A N	A N	A N	A N

If N, enter pump or valve # and circle appropriate problem: potential leak, active leak, sticking, wear, does not operate smoothly,

other:____

* Not subject to Subpart BB

For all leak and potential leaks, the Leak Detection and Repair Record must be completed.

DAILY INSPECTION LOG SHEET FOR: SOLVENT CONTAINER STORAGE AREA

CAPACITY: 2,400 GALLONS WASTE, COMBINED WASTE AND PRODUCT SOLVENT: 6,000 GALLONS

Weekday	Monday	Tuesday	Wednesday	Thursday	Friday
Name					
Date (m/d/yr)					
Time					

Containers*

Container Type	Monday		Tuesday		Wednesday		Thursday		Friday	
5-gallon	Number	Gallons	Number	Gallons	Number	Gallons	Number	Gallons	Number	Gallons
waste										
product										
16-gallon										
waste										
product										
30-gallon										
waste										
Product										
TOTAL (gallons)										

	Mon.	Tue.	Wed.	Thurs.	Fri.
	A N	A N	A N	A N	A N

If AN@ circle appropriate problem; Total Volume exceeds the amount for which the facility is permitted, other____

Condition of Containers:	A N	A N	A N	A N	A N

If AN@ circle appropriate problem: missing or loose lids, missing, incorrect or incomplete labels, rust, leaks, distortion, other__________________________________

Stacking/Placement/Aisle Space:	A N	A N	A N	A N	A N

If AN@, circle appropriate problem: proper aisle space, unstable stacks, other____

Satellite Accumulation Containers:	A N	A N	A N	A N	A N

If AN@, circle appropriate problem: improper closure, incomplete or missing label, other____

CONTAINMENT

Curbing, Floor, and Sump(s):	A N	A N	A N	A N	A N

Any material which spills, leaks or otherwise accumulates in the secondary containment must be completely removed within 24 hours of it being discovered.

If AN@, circle appropriate problem: ponding/wet spots, deterioration (cracks, gaps, etc.), leaks, inadequate sealant, other_____________________________________

Loading/Unloading Area:	A N	A N	A N	A N	A N

If AN@, circle appropriate problem: cracks, deterioration, ponding/wet spots, other:____

OBSERVATIONS, COMMENTS, DATE AND NATURE OF REPAIRS OF ANY ITEMS INDICATED AS NOT ACCEPTABLE:

____

____

*When calculating total volumes, assume the containers are full.

INSPECTION LOG SHEET FOR:

WEEKLY INSPECTION OF SAFETY AND EMERGENCY EQUIPMENT, SECURITY DEVICES AND MISCELLANEOUS EQUIPMENT

INSPECTOR NAME____

DATE ________/_______/______
M D YR

TIME________________________

SAFETY AND EMERGENCY EQUIPMENT

Fire Extinguishers: A N

If AN@, circle appropriate problem: overdue inspection, inadequately charged, inaccessible, other: _______
____

Eyewash and Shower: A N

If AN@, circle appropriate problem: disconnected, malfunctioning, heater, pressure, inaccessible, not clean, leaking, other: __________________________

First Aid Kit: A N

If AN@, circle appropriate problem: inadequate inventory, other: __________________________
____

Spill Cleanup Equipment: A N

If AN@, circle appropriate problem: inadequate supply of sorbent, drums, or shovel, missing equipment, other: __________________________________

Personal Protection Equipment: A N

If AN@, circle appropriate problem: inadequate supply of aprons, gloves, glasses, other____

Communication Devices: A N

If AN@, circle appropriate problem: malfunctioning telephone(s) and supply and location, malfunctioning intercom, emergency alarm does not work,

other____

SECURITY DEVICES

Gates and Locks: A N

If AN@, circle appropriate problem: sticking, corrosion, lack of warning signs, fit, other:____

Fence: A N

If AN@, circle appropriate problem: broken ties, corrosion, holes, distortion, signs, other:______________________________

Emergency Exits: A N

If AN@, describe problem: Blocked, exit light burned out, other______________________________

Warning Signs: A N

If AN@ describe problem:______________________________

OBSERVATIONS, COMMENTS, DATE AND NATURE OF REPAIRS OF ANY ITEMS INDICATED AS ANOT ACCEPTABLE@:

SAFETY-KLEEN SYSTEMS, INC.
SYRACUSE, NY SERVICE CENTER

ATTACHMENT III

PERSONNEL TRAINING PLAN

ATTACHMENT III

PERSONNEL TRAINING

ABSTRACT

Purpose: The purpose of training is to familiarize employees with environmental regulations, records and emergency procedures so they can perform their jobs in the safest and most efficient manner possible. The program for the Syracuse Service Center will be designed to ensure that facility personnel are able to perform their respective job duties and to respond effectively to issues and emergencies at the Service Center.

TIME OF TRAINING

Job Title	Prior to Start Work	On the Job	Annually	Regulation Change
Branch Manager	X	X	X	X
Branch Secretary		X	X	
Sales Representative	X	X	X	X
Material Handlers	X	X	X	X

ATTACHMENT III - PERSONNEL TRAINING PLAN

1.0 OUTLINE OF TRAINING PROGRAM

The Syracuse Service Center will train its employees in accordance with the requirements detailed in 6NYCRR, Part 373, Section 373-2.2(h). Employees will be trained to perform their respective job duties safely and efficiently and to understand hazards unique to their job assignment. New branch managers will complete an introductory training program before starting their jobs with an annual review and update thereafter. Sales representatives and material handlers (i.e., personnel who manage hazardous waste as a part of their job) will also receive initial training and annual reviews. No employee who manages or handles hazardous waste will work unsupervised until he or she completes the required training. An outline of the training programs given both initially and annually to employees who manage or handle hazardous waste at this Service Center is provided in Appendix III - A.

2.0 ORGANIZATIONAL STRUCTURE AND JOB DESCRIPTION

Environmental compliance and training of branch employees will be the responsibility of the branch manager. It will be the responsibility of his manager to ensure that the branch manager is trained and that he trains branch personnel. The Environmental, Health and Safety Department, in turn, provide a training program to be executed annually.

The job title for each position at the facility related to hazardous waste management, the associated job description and the name of the employee filling each job will be maintained at the facility. A copy of the job description for each individual will also be kept in the employee's training file. The job descriptions include the requisite skill, education or other qualifications and the duties of the employee assigned to that position. The job descriptions will be updated as necessary to stay current with the branch positions and the duties of each position. Copies of the job descriptions for the branch manager, branch secretaries, sales representatives and material handlers (warehouse personnel) are included in Appendix III - B. These documents are included as part of the permit and will be revised through a minor modification when required. The resume of the current Branch Manager, who is responsible for the conduct and coordination of training at the facility, is included in Appendix - III. This document is included herein for informational purposes only and can be changed without modifying the facility's operational permit. However, NYSDEC will be notified of any changes to the document within 15 days.

3.0 TRAINING RESPONSIBILITIES

3.1 Branch Manager

The branch manager will be ultimately responsible for operations at the Service Center. The sales representatives, secretaries and material handlers report to him and he, in turn, will provide

the training and materials necessary for them to execute their duties. With respect to environmental compliance, he will:

a. Keep the Service Center clean and orderly;

b. Execute or designate an employee to execute the daily inspection, keep a written log and remediate any problems;

c. Know the potential hazards of the material and wastes handled on site;

d. Identify potential spill and fire sources and be able to execute the contingency
plan;

e. Inform employees of their environmental responsibilities;

f. Notify the proper authorities during an emergency, remediate the situation to the best of his abilities, and submit necessary reports to the corporate office; and

g. Maintain environmental records (such as manifests, training records and spill reports) at the Service Center.

3.2 Regional Manager

The regional manager, or designate, oversees the operations of several service centers in a geographic area. Branch Managers report to him and he, in turn, will verify that the branch managers are operating their facilities in compliance with environmental regulations as well as Safety-Kleen's internal standards. With respect to environmental compliance, he or his designate will:

a. Perform a periodic inspection of each branch in his region to review record keeping and maintenance practices;

b. Ensure that the branch manager is training branch employees;

c. Make certain that the contingency plan and remedial actions have been properly executed for any emergencies; and

d. Assume the responsibilities of the branch operations in the absence of the branch manager.

e. Ensure that annual training for branch employees has been completed.

3.3 Environmental, Health & Safety Department

Safety-Kleen's Environmental, Health and Safety Department is headquartered at the Corporate office at 5360 Legacy Dr Plano, TX 75024. Each EHS Manager is responsible for the training, permits and other compliance issues for the branches in a geographic area of the country. The Department will:

a. Train personnel in accordance with environmental regulations and corporate policy;

b. Notify proper authorities, oversee remedial actions and submit a written report to the state after an emergency situation has occurred;

c. Assure that environmental permits are renewed and updated as required; and

d. Manage any environmental compliance issues which exceed the resources available at the branch or regional level.

The EHS Manager will visit the facility at least twice annually and make an evaluation of the adequacy of training imparted to the facility employees. If the employees are found to be inadequately trained, arrangements for additional training will be made with the branch manager.

4.0 DESCRIPTION OF THE TRAINING PROGRAM

Employee training is accomplished using classroom, video, computer and on-the-job methods. Safety-Kleen prepares a training program for its managers and employees. The Service Center will provide documentation that the training has been executed.

An employee will be trained prior to starting or as soon as he or she begins working, (depending on his or her position), and annually thereafter. The initial training program outline that will be presented to new personnel is provided in Appendix III - A. In addition to the initial and annual training, if there is an incident at the facility, it will be investigated and additional training will be provided to affected employees if necessary.

4.1 Training of New Branch Managers

New branch managers will be trained for several weeks before they begin their new position. This training is given both in situ and in classroom modes with video and computers. During training the new branch manager reviews environmental records and learns the record keeping requirements for each. These records include manifests, personnel records, training records, facility inspection records, and spill reports.

The training culminates in training at their new branch, with at least one day devoted to environmental training with the EHS Manager. At least eight hours consists of an introduction to environmental law and a review of the Waste Analysis Plan, Preparedness and Prevention Plan, Contingency Plan, Training Plan and Closure Plan. Additional time is spent reviewing past environmental compliance at the branch manager's Service Center and the regulations unique to the state are discussed as well.

The new branch manager does not work without supervision at the Service Center until the training program is complete. The training associated with a new branch manager is finalized and documented prior to their assuming unsupervised control of the facility.

4.2 Training of New Branch Secretaries

Branch secretaries will be trained in the proper record keeping procedures as soon as they begin working for Safety-Kleen (i.e., on-the-job training). While they are not responsible for preparing the documentation, they will check it for accuracy and completeness and then process or file it as required. Additional training will be overseen by the branch manager and will be done within six months of starting. It will include the items listed in the Initial Training Program Outline on hazard communication and USEPA/USDOT regulations and permit conditions. In addition, the contingency plan will be reviewed with the branch manager within the first two weeks of a secretary starting work.

4.3 Training of New Sales Representatives

New sales representatives will be trained through the use of audio-visual equipment, classroom instruction and self-study courses. Initial training will focus on the topics presented in Appendix III - A. Annual training will also be provided following the guidance detailed in the Annual Training For Branch Employees form in Appendix III - A. Additional training will be provided in the form of classroom activities and a review of the Contingency Plan. The Contingency Plan will be reviewed with the branch manager before the sales representative formally begins their new position. Training will also include a review of the facility's Waste Analysis Plan, including the acceptance criteria checklist and USDOT regulations pertaining to the segregation of materials and packaging. A sales representative may also be trained as a designate for performing the facility inspection. Items listed in the Initial Training Program Outline will be explained within six months of starting.

4.4 Training of New Material Handlers (Warehousemen)

A material handler (warehouseman) will be trained to maintain the service center and assist the other branch employees in their tasks. Training will also include a review of USDOT regulations pertaining to the segregation of materials and packaging. He/she may be a designee for facility inspections and will be trained by the branch manager as such. Within two weeks of employment, the branch manager will review the contingency plan with him/her and within six months they will review the items listed in the Initial Training Program Outline.

4.5 Annual Training

On an annual basis, employees will be trained using a program prepared and updated annually by the Corporate Environmental, Health, and Safety Department. It will include updates on environmental regulations, an in-depth review of the contingency plan, and a review of RCRA.

Branch employees will annually review the items listed in the Annual Training For Branch Employees form included in Appendix III - A. This review may take place in the classroom and may include review and discussion of the facility permit. In addition, periodic memoranda on changes in environmental regulations will be issued by the Environmental, Health, and Safety Department and will be read and discussed by branch personnel.

5.0 TRAINING RECORDS

Training will be documented. The documentation will vary depending on the type of training provided. A record of personnel training will be used for recording the training provided for each individual employee in accordance with 40 CFR Part 264.16(d)(4) and 6NYCRR 373-2.2 (h). The employee will sign the training record each time training is provided. Signing of the training record indicates that the employee has been adequately trained and questions have been satisfactorily answered. This creates an obligation on the part of the employee to comply with the rules and regulations applicable to his activities.

In accordance with 6NYCRR Part 373, Section 373-2.2(h)(5), training records of current personnel will be kept until closure of the facility; training records on former employees will be kept for at least three years from the date the employee last worked at the facility. Personnel training records may accompany personnel transferred within the company.

APPENDIX III - A

Initial Training Program Outline

Safety-Kleen Systems, Inc.
Syracuse, New York

SESSION ONE: ORIENTATION

1. Safety-Kleen's Mission
2. Branch Tour
3. Branch Structure

SESSION TWO: HAZARD COMMUNICATION

1. General Safety Information
2. Right-To-Know Training
3. Personal Protective Equipment

SESSION THREE: USEPA/USDOT REGULATIONS & PERMIT CONDITIONS

1. Facility Permit Conditions
2. Inspections
3. Overview of Generator Regulations Pertaining To Material Handling
4. USDOT Requirements

SESSION FOUR: SAFE DRIVING

1. Safe Driving
2. USDOT Requirements

SESSION FIVE: SAFE MATERIAL HANDLING

1. Hazards Associated With Material Handling
2. Material Handling
3. Manifesting
4. Housekeeping/Decontamination

5. Material Transfer

<u>SESSION SIX: SAFETY HAZARDS</u>

1. Safe Lifting
2. Mechanical Methods of Moving Materials
3. Forklift Safety

<u>SESSION SEVEN: SAFETY PROCEDURES</u>

1. Contingency Plan
2. Fire Extinguisher Use

Annual Training For Branch Employees

Safety-Kleen Systems, Inc.
Syracuse, New York

A. Environmental Regulation Update

B. Waste Analysis Plan

C. Preparedness and Prevention Plan

D. Contingency Plan and Emergency Procedures

E. Manifesting

F. Spill Reporting and Response Procedures

NOTE: Employees shall not work in unsupervised positions until they have received emergency response training (items D and F) and in the waste analysis plan (item B). Employees must be completely trained in the items listed above within six months of starting and annually thereafter.

APPENDIX III – B

Job Descriptions

FIELD POSITION DESCRIPTION

Position title: **<u>Branch General Manager</u>**

Job code: **<u>BGM</u>**

Reporting Relationship: Reports to District Manager

Qualifications:

- College Degree or equivalent sales/management experience
- Must have five (5) years of progressively responsible branch sales and management experience
- Must possess leadership abilities, and have the capacity to interface effectively with Branch, District, Region, and Marketing personnel.

Position Overview: Overall responsibility for Branch operations including, but not limited to, Growth, Profit and Loss, EH&S compliance, Asset management, Employee turnover.

Essential Job Functions and Responsibilities:

- Profit and Loss
- Customer retention
- Reduce employee turnover
- Environmental, Health & Safety (ETTS Compliance)
- Personnel management with H-R assistance
- Assist with employee recruiting and training
- Fleet management
- Community relations
- Ensure ethical business practices
- Distribute and manage sales reports
- Monitor sales / service activities

FIELD POSITION DESCRIPTION

Position title: **Lead Secretary**

Job code: LSEC

Reporting Relationship: Reports to Branch General Manager

Qualifications: Must be a high school graduate with good written and verbal communication skills, interpersonal skills and computer knowledge

Position Overview: Lead Secretary must posses the ability to interact efficiently with Branch General Manager, Customer Service Manager and Branch Sales Manager. Directs all paperwork flow and must exhibit a thorough knowledge of Hazardous Waste regulations, and all Safety-Kleen Corporate policies and procedures. Coordinates administrative staff training. Maintains training information for facility.

Essential Job Functions and Responsibilities:

- Supervise Branch Secretaries.
- Verification of Sales and Hazardous Waste documents completed by Sales and Service Representatives.
- Act as escort for government inspectors through the facility in the absence of Branch General Manager, Lead Material Handler or Environmental Manager.
- Ensure proper completion of Facility Operating Log, and proper maintenance of Accounts Receivable, branch bank deposits, Manifests, and other key administrative areas.
- May act as primary or alternate Emergency Coordinator and assists management in incident response.
- Maintain the training database, and ensure all personnel are up to date and documented on all training as required by Safety-Kleen and applicable government agencies.
- Coordinate personnel requirements such as DOT physicals, employee physicals, State Transporter License Numbers (if applicable), start packs, Worker's Compensation claims, etc.
- Monitor contractors doing work on site.
- Provides corrections for annual reports.
- Obtains EPA ID number lists for state or region.
- Oversees FRS/Lab correspondence.
- Participate in the hiring and training of Admin. Staff.
- Maintain branch level Customer Service/Collection procedures.
- Perform other duties as assigned by BGM.

FIELD POSITION DESCRIPTION

Position title: **Branch Secretary**

Job code: BSEC

Reporting Relationship: Reports to Lead Secretary

Qualifications: : Must be a high school graduate with good written and verbal communication skills, interpersonal skills and computer knowledge

Position Overview: Secretary must posses the ability to interact efficiently with Lead Secretary, Customer Service Manager and Branch Sales Manager. Directs paperwork flow and must exhibit a thorough knowledge of Hazardous Waste regulations, and all Safety-Kleen Corporate policies and procedures.

Essential Job Functions and Responsibilities:

- Verification of Sales and Hazardous Waste documents completed by Sales and Service Representatives.
- Ensure proper maintenance of Accounts Receivable, branch bank deposits, Manifests, and other key administrative areas.
- Provides corrections for annual reports.
- Oversees FRS/Lab correspondence.
- Maintain branch level Customer Service/Collection procedures.
- Perform other duties as assigned by management.

FIELD POSITION DESCRIPTION

Position title: **Material Handler, Lead**

Job code: **MHL**

Reporting Relationship: Reports to Branch General Manager

Qualifications:
- ! High school graduate
- ! Ability to pass CDL (commercial driver's license) and other hiring requirements

Position Overview: Responsible for operation of Return and Fill, site EH & S compliance and general warehouse/housekeeping

Essential Job Functions and Responsibilities:
- ! Oversee operation of Return and Fill.
- ! Assist in training Material Handlers (MHBs)
- ! Act as escort for government inspectors through the facility in the absence of Branch General Manager or Environmental Manager or Lead Secretary.
- ! Ensure proper completion of Facility Operating Log and compliance with site specific regulatory issues.
- ! May act as primary or alternate Emergency Coordinator and assists management in incident response.
- ! Monitor contractors doing work on site.
- ! Oversee facility housekeeping schedule.
- ! Other duties as directed by BGM.
- ! Facility EHS compliance.

FIELD POSITION DESCRIPTION

Position title: Material Handler, Branch

Job code: MHB

Reporting Relationship: Reports to Lead Material Handler

Qualifications:
! High school graduate
! Ability to pass CDL (commercial driver's license) and other hiring requirements

Position Overview: Operation of Return and Fill, site EH & S compliance and general warehouse/housekeeping duties

Essential Job Functions and Responsibilities:
! Operation of Return and Fill.
! Facility housekeeping.
! Other duties as directed by Lead Material Handler.
! Facility EHS compliance.

FIELD POSITION DESCRIPTION

Position title: **Customer Service Manager**

Job code: **CSM**

Reporting Relationship: Reports to the Branch General Manager

Qualifications:
- College Degree or equivalent sales/management experience
- Must have three (3) years of progressively responsible branch sales / service and management experience
- Must possess leadership abilities, and have the capacity to interface effectively with Branch, and District personnel.

Position Overview: Ensure optimum customer service leading to retention and expansion of branch business

Essential Job Functions and Responsibilities:
- Assure Customer satisfaction and retention
- Recruit / Train Customer Service Representatives
- Reduce employee turnover
- Maintain high On Time Performance
- Preprint / route management
- Manage Accounts receivable / DSO
- QA Sales and Service
- Fleet Management
- Environmental, Health and Safety

FIELD POSITION DESCRIPTION

Position title: **Customer Service Technician, Sales and Service Representative**

Job code: **CST, SSR**

Reporting Relationship: Reports to Branch Customer Service Manager

Qualifications:
! High school graduate
! Ability to pass CDL and other hiring requirements
! Mechanical aptitude
! Ability to interface with Customers and branch personnel

Position Overview: Install, maintain, repair and refurbish equipment at customers locations.

Essential Job Functions and Responsibilities:
! Level Two equipment repair
! Assure Customer Satisfaction
! Technical installations
! QA – QC equipment prior to installation
! Refurbish equipment in the field
! Maintain appropriate certifications
! Assist branch in maintaining low DSO and high On time Performance
! EH & S compliance

FIELD POSITION DESCRIPTION

Position title: **Senior Customer Service Representative**

Job code: **CSRS**

Reporting Relationship: Reports to the Branch Customer Service Manager

Qualifications:

- High school graduate
- Ability to pass CDL and other hiring requirements
- Mechanical aptitude
- Ability to interface with Customers and branch personnel

Position Overview: Assist Branch Service Manager to ensure optimum customer service leading to retention and expansion of branch business

Essential Job Functions and Responsibilities:

- Assist in recruiting, training and managing Customer Service Reps
- Service equipment at Customers
- Develop strong customer relations
- Maintain high branch On Time Performance
- Maintain low branch DSO
- Installation/Recovery of equipment
- Level One equipment repair
- EH&S Compliance including proper completion of customer audits, fingerprints for waste acceptance, and checklists.
- Other duties as assigned by the Branch Service Manager

FIELD POSITION DESCRIPTION

Position title: **Customer Service Representative**

Job code: **CSREP**

Reporting Relationship: Reports to Branch Customer Service Manager

Qualifications:
! High school graduate
! Ability to pass CDL and other hiring requirements

Position Overview: Provide service at a level that meets or exceeds customer expectations.

Essential Job Functions and Responsibilities:
! Service equipment at Customers
! Develop strong customer relations
! Maintain high branch On Time Performance
! Maintain low branch DSO
! Installation/Recovery of equipment
! Level One equipment repair
! EH&S Compliance
! Other duties as assigned by the Branch Service Manager

FIELD POSITION DESCRIPTION

Position title: **Customer Service Representative, Oil**

Job code: **CSOIL**

Reporting Relationship: Reports to Branch Customer Service Manager

Qualifications:
! High school graduate
! Ability to pass CDL and other hiring requirements

Position Overview: Provide service at a level that meets or exceeds customer expectations.

Essential Job Functions and Responsibilities:
! develop strong customer relations
! Maintain high branch On Time Performance
! Maintain low branch DSO
! E, H&S Compliance
! Other duties as assigned by the Branch Service Manager

FIELD POSITION DESCRIPTION

Position title: Customer Service Representative, Vac

Job code: CSVAC

Reporting Relationship: Reports to Branch Customer Service Manager

Qualifications:
! High school graduate
! Ability to pass CDL and other hiring requirements

Position Overview: Provide service at a level that meets or exceeds customer expectations.

Essential Job Functions and Responsibilities:
! Develop strong customer relations
! Maintain high branch On Time Performance
! Maintain low branch DSO
! EH&S Compliance
! Other duties as assigned by the Branch Service Manager

FIELD POSITION DESCRIPTION

Position title: **Branch Sales Manager**

Job code: **BSM**

Reporting Relationship: Reports to Branch General Manager

Qualifications:
! College Degree or equivalent sales/management experience
! proven sales / management ability
! self motivated
! excellent communication and presentation skills

Position Overview: Manage sales to existing and new customers – supervise Branch Sales Specialists

Essential Job Functions and Responsibilities:
! Growth / Quota attainment
! Establish goals and monitor sales activity
! Recruit, train and develop Sales Specialists
! Customer retention / Accounts Receivable
! Key Account management
! Comply with Corporate Credit Policies
! Gather competitive information
! Collaborate with Branch Service Manager to ensure high level of Customer satisfaction / retention

FIELD POSITION DESCRIPTION

Position title: **Senior Branch Sales Specialist**

Job code: **SBSS**

Reporting Relationship: Reports to Branch General Manager

Qualifications:
! high school graduate
! proven sales / management ability
! self motivated
! excellent communication and presentation skills

Position Overview: Direct sales to existing and new customers -- supervise Branch Sales Specialist(s)

Essential Job Functions and Responsibilities:
! Growth / Quota attainment
! Establish goals and monitor sales activity
! Recruit, train and develop Sales Specialists
! Customer retention / Accounts Receivable
! Key Account management
! Comply with Corporate Credit Policies
! Gather competitive information
! Collaborate with Branch Service Manager to ensure high level of Customer satisfaction / retention

FIELD POSITION DESCRIPTION

Position title: **Branch Sales Specialist**

Job code: **BSS**

Reporting Relationship: Reports to Branch Sales Manager or Senior Sales Specialist

Qualifications:
- high school graduate
- proven sales ability
- self motivated
- excellent communication and presentation skills

Position Overview: Grow branch businesses through direct selling to new and existing customers

Essential Job Functions and Responsibilities:
- Full time direct sales to specific SIC
  - Current account expansion
  - New account creation
- Account retention / Accounts Receivable
- Sample waste streams
- Comply with Corporate Credit Policies

SAFETY-KLEEN SYSTEMS, INC.
SYRACUSE SERVICE CENTER
EPA ID No. NYD 982743312

ATTACHMENT IV

SECURITY PLAN

ATTACHMENT IV

SECURITY PLAN

ABSTRACT

Purpose: Safety-Kleen's Syracuse, New York facility employs a variety of measures to prevent on-site hazards. One such measure is the implementation and maintenance of a sound security program. The purpose of this plan is to describe the engineered and procedural controls in place that enhance the overall security of the facility and that prevent the unknowing and/or unauthorized entry of persons or livestock onto the active portion of the facility.

ATTACHMENT IV - SECURITY PLAN

1.0 SECURITY SYSTEMS

The facility is secured with a five-foot high chain link fence topped by three strands of barbed wire. Access gates remain closed at all times and are opened only for the entry of vehicles and personnel. Warning signs stating "Danger - Unauthorized Personnel Keep Out" which are visible from twenty-five feet are posted at the entrances. In addition, outdoor lighting is on during non-daylight hours.

The office/warehouse building is secured with locks on doors and warning signs are posted at entrances to waste management areas.

The hazardous waste tank is inaccessible in that material cannot be added to or removed from it without activating the pumps, the controls for which are inside the warehouse. The pumps are not activated unless solvent is being added to or removed from the tank by Safety-Kleen personnel. In addition, warning signs are posted on the return and fill station.

SECURITY MEASURES--The site is secured as follows:

a. There is a chain link fence with barbed wire around the facility.

b. Warning signs are posted at entrances.

c. Locks are on entrances to the warehouse.

d. Remote controls for tank operations are inside the warehouse.

e. There is outdoor lighting on during non-daylight hours.

SAFETY-KLEEN SYSTEMS, INC.
Syracuse SERVICE CENTER
EPA ID No. NYD 982743312

ATTACHMENT V

PREPAREDNESS AND PREVENTION PLAN

ATTACHMENT V

PREPAREDNESS AND PREVENTION PLAN

ABSTRACT

Purpose: The Syracuse Service Center is designed, constructed, maintained and operated to minimize potential issues and concerns associated with the on-site management of waste materials. The purpose of this plan is to review and describe the above defined elements in place at the Syracuse facility that are directed toward minimizing the potential for the occurrence of a fire, explosion or any release of hazardous waste that could threaten human health or the environment.

ATTACHMENT V - PREPAREDNESS AND PREVENTION PLAN

1.0 FACILITY DESIGN

The Syracuse Service Center was designed to minimize the possibility of spills or fires and to minimize the effects of any accidents which may occur. Specifications for the storage facilities, secondary containment features and other security/safety equipment in place at the facility are in subsequent Attachments. Descriptions of the materials and equipment present on-site to assist the Syracuse facility in the preparation for, and prevention of, incidents are presented below.

1.1 Tank Storage

A complete description of the aboveground storage tank and secondary containment system is provided in Attachment IX, along with the tank installation engineering assessment engineer drawings. The inspection procedures in Attachment II will detect failure of the containment system or the presence of accumulated liquid within 24 hours.

The tank is equipped with a siren and a strobe light high level alarm system that will alert employees when the tank is 95% full. In addition, the dumpsters are equipped with automatic shutoff systems to prevent overfilling of the tank.

1.2 Solvent Return and Fill

The return and fill stations are sheet steel structures. The dumpsters are tight-piped to the tank. The hazardous waste piping is aboveground and piping joints located outside of any engineered secondary containment systems are welded

The dumpsters are also underlain by an engineered secondary containment system with greater than 100% of their total volume. In addition, a roof prevents precipitation from collecting.

1.3 Vehicle Management

Containerized spent parts washer solvents will be temporarily stored on-site in vehicles prior to unloading into the storage tank through the return and fill station. The individual vehicles will be equipped with secondary containment systems designed to capture liquid waste material released in the storage compartment of the vehicles.

1.4 Container Storage Area

The container storage area is located in the return and fill area of the facility. Waste solvent containers will be stored on the steel grates adjacent to the wet dumpster and barrel washer units. The secondary containment beneath the grates consists of concrete flooring, which is sloped towards two concrete sumps (with a combined containment capacity of 842 gallons). The concrete curbing and flooring containment volume is approximately 4,346 gallons. The concrete collection sumps, curbing, and flooring have been coated with a sealant, which is compatible with the materials stored in the dumpster, washer, and solvent containers. Any accumulated liquids in the containment area are removed to prevent overflow. All material collected from spill cleanups will be treated as hazardous waste unless proven otherwise. When a container is moved a potential exists for it to tip over. To minimize the potential for spillage of solvent, all containers must be maintained in an upright position and remain tightly covered while in storage or in transit.

The Syracuse Service Center offers a service to collect and manage various wastes from its industrial and automotive customers. These wastes are generated from a variety of processes and vary from customer to customer. The containerized wastes will be managed at the facility under the 10-day storage exemption allowed in 6NYCRR Part 373, Section 373-1.1(d)(*xv*). It will be temporarily stored in the transfer container management areas of the warehouse. These management areas will have secondary containment designed in accordance with 6NYCRR Part 373, Section 373-2.9. Additionally, the exempt wastes will be packaged, segregated and managed in accordance with USDOT regulations.

2.0 PLANT OPERATIONS--POTENTIAL SPILL AND FIRE SOURCES AND CONTROL PROCEDURES

Employees must perform their duties in the safest, most efficient manner possible and the Service Center has been equipped to facilitate these activities. Upon arrival at the Service Center, transport vehicles with containers of spent parts washer solvents will be temporarily staged in the parking lot. The spent solvent containers will then be removed from the vehicles and added to the storage tank. Transfer operations will occur at the secondarily contained return and fill station. Open containers of waste will not be left unattended. Below are descriptions of situations which can result in accidents and the precautions taken to prevent their occurrence.

2.1 Potential Incidental (Minor) Spill Sources

The following is a list of activities that have the potential for an incidental spill (one that can be remediated without assistance from a clean up contractor and does not require implementation of the Contingency Plan):

a. <u>Pouring liquids into the dumpsters</u> As the parts washer solvent containers are poured into the dumpsters, material can splash out. Employee training emphasizes the importance of taking care in emptying the drums. The return and fill station is underlain by a metal pan with a drain that empties into a satellite accumulation container. The entire area over which the emptying of containers takes place is within secondary containment. The design of this area will contain this type of spill.

b. <u>Filling containers with solvent product</u> A low pressure hose with an automatic shut-off valve similar to those used at automotive service stations is used to fill the containers with hydrocarbon based solvent. Leaking fittings, a damaged hose, or carelessness could lead to the discharge of solvent outside of the container. Manual emergency shut-off valves are on each hose in case the equipment malfunctions. In addition, employee training emphasizes the importance of inspection, maintenance and reporting of conditions with pollution incident potential.

c. Moving containers When a container is moved, a potential exists for it to tip over. To minimize the potential for spillage of material containers must be maintained in an upright position and remain tightly covered while in storage or in transit.

d. Delivery truck transfers Cargo must be secured in the vehicle before transport. Individual containers of material can tip over or be dropped when being moved on or off a delivery truck. Therefore, whenever possible, containers will be handled using a handcart, forklift or a hoist. However, some situations may require the manual movement of a container. In these instances, caution will be exercised to ensure safe movement.

If an incidental spill does occur, the amount of material in a container is a quantity which can be collected with sorbent or pads. If soil is contaminated it will be removed and shipped to a Safety-Kleen Recycle/Process Center or other properly permitted facility for proper management.

2.2 Potential Major Spill Sources

The following activities have the potential for a major spill (one for which remedial action will require assistance and implementation of the Contingency Plan):

a. Overfilling storage tanks The waste tank can be overfilled with a resulting discharge of fluid. A high level alarm and daily checks of tank volumes will prevent this type of incident.

b. Leaking pipelines The pipelines and other equipment present a potential for leaks and resultant pollution. Regular inspection of this equipment will detect any leaks.

2.3 Potential Fire Sources

The following is a list of fire prevention and minimization measures:

a. Wastes and products are kept away from ignitable sources. Personnel will confine smoking and open flames to remote areas, separate from any stored material. The parts washer solvent handling area and the aboveground storage tanks are separated from the warehouse building area to minimize the potential for a fire to spread or injury to personnel to occur.

b. Ignitable wastes are handled so that they do not:

- Become subject to extreme heat or pressure, fire or explosion, or a violent reaction. The waste is stored in a tank or in containers, neither of which are near sources of extreme heat, fire, potential explosion sources nor subject to violent reactions. The tanks are vented and kept at ambient temperature to minimize the potential for pressure build up.

- Produce uncontrolled toxic mists, fumes, dusts or gases in quantities sufficient to threaten human health. The vapor pressure of Safety-Kleen hydrocarbon based solvent is low (2mm) and it is reactive with strong oxidizers only. Toxic mists, fumes, dusts or gases will not form in quantities sufficient to threaten human health since strong oxidizers are not managed proximal to the solvent handling areas. Additionally, material is segregated in accordance with USDOT regulations. The solvent's low vapor pressure assures that vaporization will be minimal under normal working conditions.

- Produce uncontrolled fires or gases in quantities sufficient to pose a risk of fire or explosion.

- Damage the structural integrity of the Safety-Kleen facility. The parts washer solvents will not cause deterioration of the tank, drums or other structural components of the facility.

c. No Smoking signs are posted in areas where flammable/ignitable materials are handled or stored.

d. Fire extinguishers will be checked once per month and tested by a fire extinguisher company once per year. In addition, the area where ignitable wastes are managed are covered by either a sprinkler system or a dry-chemical fire suppression system.

Safety-Kleen has an automatic response system with the fire department which operates 24 hours a day. In addition, a water-based sprinkler system covers the return and fill area and an automatic, dry-chemical fire suppression system is integral to the steel secondary containment system of the hazardous waste storage tank.

2.4 Tank Evaluation and Repair Plan

The wastes stored in the tank at this facility are hydrocarbon and aqueous based parts washer solvents which are compatible with the carbon steel tank structure. In fact, the hydrocarbon-based parts washer solvent is often used as a light hydrocarbon coating to prevent rusting of metal parts.

If corrosion is noted, it will be removed and the tank repaired. If the corrosion is significant and localized, the tank will be taken out of service and repaired, (e.g., a patch welded over the corroded area). Should the corrosion of the vessel be extensive or if the tank is found to be leaking and repair of the tank is not practicable, the vessel will be taken out of service and replaced. In the case of a tank which leaks outside of the dike, the facility contingency plan will be initiated to ensure the removal of any contaminated soil.

2.5 External Factors

The design of the installation is such that a harmful spill is highly unlikely to occur from most external factors. The storage tanks are inaccessible to non-Safety-Kleen personnel and the pump switches are located inside the building. Also, the parts washer solvent handling area (i.e., return and fill) is in the warehouse building and is inaccessible to unauthorized personnel.

a. Vandalism - Only extreme vandalism would result in a material spill or fire. Response to spills and fires are described in the contingency plan.

b. Strikes - A strike would not result in a material spill or fire.

c. Power failure - A power failure would not result in a spill or fire. Should a power failure occur, activities requiring electricity will cease. In addition, emergency lighting units are installed to aid personnel in evacuating the facility.

d. Flooding - The site elevation is above the projected 100-year flood plain; therefore, a 100-year flood will not affect the facility.

e. Storms or Cold Weather - The return and fill station is roofed to eliminate the possibility of rain or snow entering the dumpsters. No opportunity is foreseen to affect the facility with snow, cold weather or storm water.

3.0 INTERNAL AND EXTERNAL COMMUNICATIONS AND ALARM SYSTEMS

Internal communication within the building and the return and fill area is accomplished by voice and intercom. Telephones will be used to report a spill or a fire and to summon assistance from local and state emergency response agencies. Branch managers have emergency phone numbers of local and state emergency response teams posted by the phones located in the sales office. Included in these phone numbers is the 24-hour telephone number which can be used to contact the Environmental, Health and Safety Department.

SAFETY-KLEEN SYSTEMS, INC.
SYRACUSE SERVICE CENTER

ATTACHMENT VI

CONTINGENCY PLAN

ATTACHMENT VI

CONTINGENCY PLAN

ABSTRACT

PURPOSE: This Contingency Plan describes the proper actions to take during a response incident at Safety-Kleen's Syracuse, New York hazardous waste management and USDOT transfer facility to prevent or minimize hazards to human health and the environment from fires, explosions or any other release of hazardous waste constituents to the air, soil, surface water or groundwater.

RESPONSIBILITIES: The emergency coordinator or his alternate(s) is responsible for implementing the Contingency Plan during an emergency.

EMERGENCY COORDINATORS: The branch manager is the facility's primary emergency coordinator. The Service Center designates one or more alternate emergency coordinators. The names, addresses and telephone numbers of the primary and alternate emergency coordinator(s) are included in Table VI - 1.

EMERGENCY NOTIFICATIONS:

AGENCY	TELEPHONE
Safety-Kleen's 24-hr EHS Department	(800) 468-1760
Emergency Police and Fire	911
East Syracuse Fire Department	315-437-3541
Onondaga County Sheriff	315-435-2111
St. Joseph's Hospital	315-448-5111
Environmental Products and Services Co.	800-843-8265 (24-hr)
New York Department of Environmental Conservation - Oil and Chemical Spills Hotline (24 hours)	(800) 457-7362 (In state) (518) 457-7362
National Emergency Response Center	(800) 424-8802

ATTACHMENT VI - CONTINGENCY PLAN

This Contingency Plan has been prepared for the Safety-Kleen Systems, Inc. Service Center located at 6741 VIP Parkway, Syracuse, New York. The facility functions as a permitted hazardous waste storage area and also manages containerized hazardous and non-hazardous wastes on a USDOT transfer basis. Hydrocarbon- and aqueous-based solvents are handled in a permitted container storage area in the return and fill building with a maximum waste storage of 2,400 gallons and in bulk through use of a permitted, 20,000 gallon storage tank. A portion of the facility is also used for the temporary storage of containerized hazardous and non-hazardous wastes managed on a USDOT transfer basis. The facility manages containerized, non-hazardous waste in accordance with 6NYCRR Part 360, Section 360-1.7(b)(7).

The Contingency Plan describes the actions to be taken by the Service Center in the event of a major spill, fire or other response incident. It includes the information necessary to address response situations efficiently and in such a manner as to prevent or minimize hazards to human health and the environment due to fire, explosion or any other release of hazardous waste constituents to the air, soil, surface water or groundwater.

The Contingency Plan is to be expeditiously carried out whenever there is a major emergency that could threaten human health or the environment. Implementing the procedures contained in this plan should effectively mitigate such threats.

The emergency coordinator, or the alternate emergency coordinator(s), are responsible for implementing the Contingency Plan during an emergency response event; however, employees must be familiar with the procedures in this plan to ensure that it is properly implemented.

The plan will be maintained and amended when there are changes to ensure overall preparedness for potential contingencies related to waste management including both hazardous and non-hazardous wastes. Copies will be maintained at the Service Center and by the local police department, fire department, and hospital for use during an emergency.

1.0 GENERAL INFORMATION

This Contingency Plan describes the actions to be taken at the Syracuse Service Center in the event of fires, explosions, or releases of hazardous waste constituents. The address of the Service Center is:

Safety-Kleen Systems, Inc.
6741 VIP Parkway
Syracuse, NY 13211

The operator of the Service Center is:

Safety-Kleen Systems, Inc.
5360 Legacy Dr.
Plano, TX 75024

1.1 Description of Business Activity

The Syracuse Service Center is an accumulation point for spent solvents, dry cleaning wastes, paint related wastes, automotive wastes and various other spent industrial and automotive materials. A majority of these wastes are handled as 10-day storage exempt waste. Only the hydrocarbon- and aqueous- based parts washer solvents are terminated for storage. Wastes are ultimately transported off-site to a Safety-Kleen Recycle/Process Center or a.

Safety-Kleen is an international service-oriented company whose customers are primarily engaged in automotive repair, industrial maintenance, manufacturing, photo processing and dry cleaning. The company has been operating since 1968 offering waste collection and reclamation services for its 400,000 customers, more than 95 percent of whom generate less than 1,000 kilograms (2,200 pounds) of waste per month. Safety-Kleen's Syracuse facility provides waste management and recycling services to approximately 4,000 businesses, the majority of which are small businesses and small quantity generators.

Wastes managed by the Syracuse facility are transported from the Service Center to one of Safety-Kleen's Recycle/Process Centers and in many instances, the recovered materials are returned to customers as usable product. A unique feature of Safety-Kleen's solvent service (i.e., hydrocarbon- and aqueous- based parts washer solvents) is that Safety-Kleen provides the customer with the solvents and also manages the spent solvents. This "closed-loop" system allows Safety-Kleen to maintain control of the solvents except while they are in use at the customer's place of business. The Syracuse facility also provides assistance to waste generators for the proper transport and management of a variety of spent automotive and industrial materials. These materials are handled in containers and managed by the service center on a transfer basis in accordance with relevant USDOT and New York regulations.

1.2 Waste Descriptions

Various types of wastes result from the servicing of Safety-Kleen customers and maintenance of the Service Center. Wastes are handled and managed in both tanks and containers. Because all wastes are assumed to contain free liquids, the waste management areas at the facility (i.e., the bulk storage tank, transfer container management areas and the return and fill station) are provided with secondary containment systems. This Section provides descriptions of the waste streams terminated and stored at the Service Center (i.e., hydrocarbon- and aqueous- based parts washer solvents) and their associated hazardous characteristics and/or constituents. Additionally, similar data is provided for on-site generated wastes and for wastes that are managed on a transfer basis.

The only types of hazardous and non-hazardous wastes that are accepted from off-site generators and stored at the service center are Spent Safety-Kleen Parts Washer Solvents. These are Hydrocarbon based (mineral sprits) and aqueous-based.

In addition to these solvents several types of other waste material are generated on site as a result of operations. These wastes include but are not limited to the following:

- Wastes from tanks,
- Contaminated Gloves, Rags, Paper, absorbent, etc., and
- Wastes From The Return and Fill Station.

Other waste streams are managed by the Syracuse facility on a temporary storage and transfer basis in accordance with relevant USDOT and New York regulations. An overview of the general characteristics and types of waste destined for management at the facility follows.

1.2.1 Permitted Storage Wastes

1.2.1.1 Parts Washer Service Wastes

The original service offered by Safety-Kleen in 1968 was the Parts Washer Service and it remains the primary business activity. This service involves the leasing of a small parts degreasing unit which consists of a sink affixed to a container holding Safety-Kleen parts washer solvent. The parts washer solvents are hydrocarbon-based solvents used for parts cleaning. Safety-Kleen also offers an aqueous-based solvent for use in parts cleaning. Both the hydrocarbon- and aqueous- based parts washer solvents are used and managed in the same fashion. On a regularly scheduled basis, a Safety-Kleen sales representative cleans and inspects the parts washer machine and replaces the container of used solvent with one of clean product. Each sales representative performs about fifteen of these services per day, collecting the containers of used solvent on a route van. The spent parts washer solvent is returned to the Syracuse facility in containers. The containers are emptied into the bulk solvent storage tank through use of two, drum washer/dumpster units positioned atop the return and fill station (see Figure VI - 1).

Safety-Kleen offers low-flash solvents and high-flash hydrocarbon-based solvents for the parts washer machines. The high flash solvents (i.e., with flash points greater than 140 F) are provided to the customer as non-hazardous and may be returned as hazardous with toxicity characteristics or as non-hazardous, depending on the customer's use of the parts washer machine.

Hazardous and non-hazardous solvents from parts washer machines are commingled and accumulated in a 12,000-gallon, aboveground hazardous waste storage tank through the return and fill station. Only non-hazardous parts washer solvents, as determined by generator knowledge, are bulked into the hazardous waste storage tank with the hazardous waste solvent. Containers holding spent parts washer solvents are poured into one of two dumpster units at the return and fill station and then are pumped into the tank. The location of the return and fill station and the bulk solvent storage tank are shown on Figure VI - 1.

Review of Safety-Kleen waste sampling studies reveals a great deal about the spent parts washer solvents. Analyses of spent, hydrocarbon-based, parts washer solvents have shown concentrations of TCLP metals and volatiles in the parts per million range. Analyses of spent aqueous parts washer solvent has shown concentrations of TCLP volatiles in the parts per million range.

The recycled parts washer solvent delivered to a customer possess a clear or green color, which degrades to a brown or blackish color as it is used depending on the use of the solvent. Virgin (non-recycled) parts washer solvent may be clear. The spent parts washer solvent generally retains the characteristic odor of the recycled parts washer solvent that is delivered to the customer.

Historically, the hazardous, hydrocarbon-based parts washer solvents have had a flash point ranging between 102 and 140 F. Sampling of bulk loads revealed a flash point range of 78 to 151 F, with a mean flash point of 112 F.

The aqueous-based parts washer is a service that uses a solution of approximately 95% water and 5% active ingredients (surfactants) instead of hydrocarbon-based solvents. It has been developed as an alternative for those customers that do not want to use hydrocarbon-based solvents. The Clean Air Act, health and safety concerns and waste minimization are all possible reasons for a customer to want to use an aqueous-based parts washer.

Hazardous aqueous based parts washer solvents from parts washer machines are commingled and accumulated in a 20,000-gallon aboveground hazardous waste storage tank through the return and fill station. (These solvents are commingled with the hydrocarbon-based material). Containers holding hazardous aqueous parts washer solvents are poured into one of two drum washer/dumpster units at the return and fill station and then pumped into the tank (see Figure VI - 1).

The parts washer solvent is removed from the hazardous waste storage tank by a tanker truck on a regularly scheduled basis. Approximately 6,000-7,000 gallons are removed from the storage tank every two weeks. This commingled waste may be ignitable (D001) and may exhibit toxicity characteristics using the toxicity characteristic leaching procedure (D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D023, D024, D025, D026, D027, D028, D029, D030, D032, D033, D034, D035, D036, D037, D038, D039, D040, D041, D042).

1.2.2 On-Site Generated Wastes

As a result of operating and maintaining the facility, waste is generated at the Service Center. Waste that is containerized is stored in one of two container management areas located in the warehouse (see Figure VI - 1).

Approximately once every year, it is necessary to remove the spent parts washer solvent tank bottom sediment, consisting of free water and other heavy materials such as grit and metal filings that may accumulate in the spent parts washer solvents, from the bottom of the hazardous waste storage tank. A vacuum truck is used for this purpose and can collect up to 4,000 gallons of this waste for reclamation. This waste may be ignitable (D001) and may exhibit toxicity characteristics using the toxicity characteristic leaching procedure (D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D023, D024, D025, D026, D027, D028, D029, D030, D032, D033, D034, D035, D036, D037, D038, D039, D040, D041, D042). This waste stream is generated on-site by Safety-Kleen and is not a waste accepted from an off-site generator.

Contaminated gloves, rags, paper, absorbent and other miscellaneous material such as personal protective equipment is generated by the facility as a result of the management of hazardous wastes. Each operating day this material is placed into containers. This waste may be ignitable (D001) and may exhibit toxicity characteristics using the toxicity characteristic leaching procedure (D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D023, D024, D025, D026, D027, D028, D029, D030, D032, D033, D034, D035, D036, D037, D038, D039, D040, D041, D042). This waste stream is generated on-site by Safety-Kleen and is not a waste accepted from an off-site generator.

Sediment also accumulates at the bottom of the drum washer/dumpster units in the return and fill station. Periodically this sediment is manually removed and placed into containers. The chemical composition and hazardous characteristics of this waste are similar to that of the spent parts washer solvents tank bottom sediment and may have the same hazardous waste numbers. Like the tank bottom sediment described above, this waste is generated on-site by Safety-Kleen.

1.2.3 Transfer Waste Management Service

The Syracuse Service Center offers a service to collect and manage various wastes from its industrial and automotive customers. These wastes are generated from a variety of processes and vary from customer to customer. The containerized wastes are managed at the facility as a 10-day storage exempt waste on a transfer basis. It is temporally stored for ten days or less in the transfer container management areas of the warehouse. These wastes are under active shipping papers.

All USEPA and New York Department of Environmental Conservation (NYDEC) defined hazardous and non-hazardous wastes are included in this program. This includes characteristic and F, P, U and K listed wastes. These wastes are collected and transported in appropriately approved containers and placed in one of the transfer container management areas in the warehouse (see Figure VI - 1). The materials are managed and segregated in accordance with 49 CFR 177.848. These wastes are transported from the Syracuse Service Center to a Safety-Kleen Recycle/Process Center or contract reclaimer within the regulatory required time frame.

1.3 Waste Management Areas

Spent parts washer solvents are stored in a permitted 20,000-gallon bulk storage tank. The tank is constructed of steel and is secondarily contained. Figure VI - 1 details its location. This area is protected from releases by a secondary containment system consisting of a sloped concrete floor and two spill collection sumps.

Parts washer solvent is transferred into the tank through use of two wet dumpsters. These units are positioned atop a secondarily contained area referred to as the return

and fill station. As shown in Figure VI - 1, the return and fill station is attached to the warehouse.

Containerized wastes managed as 10-day storage exempt wastes and those generated from on-site operations are stored in a transfer waste management area located in the warehouse. The location of this secondarily contained area is shown on Figure VI - 1.

2.0 EMERGENCY COORDINATORS

The emergency coordinator (Branch General Manager) and the alternate emergency coordinator(s) located at the Syracuse Service Center are trained to respond in the event of an emergency situation. The primary and alternate emergency coordinators, home addresses, phone numbers and cell phone numbers as well as the office phone number are listed in Table VI - 1. The emergency coordinator or the alternate emergency coordinators are authorized to commit the Service Center's resources, equipment and personnel, as necessary, to carry out this Contingency Plan.

At least one emergency coordinator, or an alternate emergency coordinator, is at the Service Center or on call and capable of reaching the Service Center in time to effectively respond to potential response situations. Each emergency coordinator and alternate emergency coordinator is familiar with this Contingency Plan, the operations and activities at the Service Center, the location and characteristics of wastes handled, the location of Service Center records, the Service Center layout, and the location and use of response and spill control equipment.

TABLE VI - 1

List of Emergency Coordinators

Safety-Kleen Systems, Inc.
Syracuse, New York

Emergency Coordinators	Office Phone #	Home Phone #	Home Address
Primary Harry David Raleigh	315-455-1426 Cell 315-481-4686	617-797-9064	2 Green St. Camillus, NY 13031
Alternate John Beitz	315-455-1426 Cell 315-952-3107	315-668-9947	5354 Ballyshannon Rd. Brewerton, NY 13029
Alternate Rose Hill	315-455-1426 Cell 315-559-1960	315-454-0617	303 Florida Rd. Mattydale, NY 13211

Whenever there is an imminent or actual response situation, notice will be given to the emergency coordinator and/or alternate(s). As is discussed in subsequent sections, it is then the responsibility of the emergency coordinator or the alternate emergency coordinator (when the emergency coordinator is not available) to:

- Evaluate the situation and decide whether to implement the Contingency Plan;
- Determine the exact source, amount and aerial extent of any released materials whenever there is a release, fire or explosion.
- Assess possible hazards to human health or the environment;
- Supervise the response following the procedures in the Contingency Plan if implementation of the plan is warranted.
- Notify outside emergency, state and local agencies and Safety-Kleen's EHS Department.
- Supervise the evacuation plan, if warranted or if police or fire officials order an evacuation.
- Act as liaison between emergency and state agencies and Service Center personnel.
- Supervise cleanup operations following the procedures in the Contingency Plan; and
- Perform follow-up emergency reporting procedures.

3.0 IMPLEMENTATION

Response situations may occur at any time as a result of natural forces, trespassing, accidents, hazardous substance spills, or other situations that disrupt essential operations. The emergency coordinator and alternate(s) must be prepare to respond in a technically-effective and time-efficient manner.

The decision to implement the Contingency Plan depends upon whether an imminent or actual incident such as a fire, explosion; or release of hazardous waste or hazardous waste constituents could threaten human health or the environment. The emergency coordinator or alternate(s) will decide the extent to which the Contingency Plan should be implemented.

The full Contingency Plan will be implemented in response to the situations detailed below. However, any situation not listed below which will warrant the implementation of the full Contingency Plan will be evaluated and decided by the emergency coordinator. The decision to implement the Plan will ultimately rest with the emergency coordinator.

Fire or Explosion:

- Fire that may cause the release of toxic fumes;
- Fire that may spread and ignite waste materials or cause an explosion;

- Fire that may spread off-site or cause personal injury;
- Use of water or chemical fire suppressants that may result in excessive runoff;
- An imminent danger exists that an explosion may occur;
- An explosion has occurred.

Spill or Release:

- Spill of a flammable liquid that presents an imminent danger of an explosion;
- Spill resulting in the release of toxic liquids from a secondary containment system;
- Spill that may cause potential ground water contamination;
- Spill that can not be contained on-site;
- Spill of significant size or danger to threaten human health, contaminate the
- Spill outside of secondary containment if it exceeds 10 lbs.

4.0 RESPONSE PROCEDURES

4.1 Response Classification

Safety-Kleen has a classification system that is used to determine the severity of a given situation. Response activities and implementation procedures are dictated by how an event is classified. The emergency coordinator or the alternate emergency coordinator classifies the event based on his or her assessment and judgment. Events are classified as either incidental situations or major emergencies. An incidental situation encompasses small spills or fires that can be effectively cleaned up or extinguished without outside assistance. Such an event would not require implementation of the Contingency Plan. A major emergency addresses any potential spill, fire or explosion involving wastes that could pose a serious threat to human health or the environment and could likely require outside assistance. A major emergency would require implementation of the Contingency Plan.

4.1.1 Incidental Event

An incidental event applies to minor fires or releases involving a waste that can be easily contained and effectively cleaned up. A small leak, spill or fire would fall under this classification. The chemical involved would be identifiable with its hazards known and the necessary emergency equipment available to facility personnel for response. Such an event would present only minimal potential for injury or property damage with essentially no potential for public exposure. The event would be controlled by Service Center personnel without outside assistance. Such events do not require implementation of the full Contingency Plan. Response actions will be performed by on-site personnel.

4.1.2 Major Emergency

A major emergency warrants full implementation of the Contingency Plan to address waste emergencies that could seriously threaten human health or the environment. Emergencies in this category would likely require the assistance of outside emergency response organizations. Examples of major emergencies are:

- A non-containable, quickly-spreading fire or one that could potentially spread to other waste containers or cause an explosion;

- A non-containable release that threatens to enter storm sewers, municipal sewer or surface waters;
- A release of materials that pose significant hazards to human health or the environment; or

- Any explosion.

4.2 Identification of Wastes

Whenever there is a release, fire, or explosion, the emergency coordinator must identify the character, source, amount and extent of any released materials and obtain any other pertinent information related to the event as expeditiously as possible. This information can be readily obtained from the facility operating log. This log details on a daily basis the type, waste codes and volume of material in the bulk solvent storage tank and in the warehouse transfer waste management areas. The operating log is maintained at the facility and is updated each operating day.

4.3 Assessment

The emergency coordinator will assess the potential for a release or fire to get beyond the control of Service Center personnel. The assessment will take into account the magnitude of the event, the proximity to Service Center boundaries and surrounding neighbors, the potential for fires to spread or hazardous waste constituent releases to reach groundwater or surface water, and the progress being made by Service Center personnel in controlling the release or fire. The assessment must also consider both direct and indirect effects of the release, fire or explosion (e.g., the effects of any toxic, irritating or asphyxiating gases that may be generated, or the effects of any hazardous runoff).

After identifying the nature of the event and the type of hazardous materials involved by review of the facility operating log, the emergency coordinator will determine the appropriate response. If necessary, the emergency coordinator will check the 1996 edition of the North American Emergency Response Guidebook (ERG) for information on specific hazards. This publication lists hazardous materials by chemical name as well as by USDOT UN numbers and details the procedures that should be used to respond to an incident involving specific hazardous materials. This reference provides response data on the hazardous materials that will be managed by the facility.

Following review of available information and, if necessary, the ERG, the emergency coordinator will assess the severity of an event.

4.4 Notification

NYDEC will be informed within five business days of release if the release is 10 pounds or more or above reportable quantity specified in 6NYCRR Part 596 which ever is less; and of any fires at the facility. Spills exceeding the reportable quantity that cannot be completely contained and remediated within 24 hours will be reported to the Department within 2 hours of discovery.

If the event is classified as incidental, then Service Center personnel will handle it in accordance with the applicable portions of the Contingency Plan. If the event is a major emergency, the emergency coordinator will perform the following:

- Implement the Contingency Plan;
- Supervise the response following the procedures in the Contingency Plan;
- Notify Safety-Kleen's EHS Department, the New York Department of Environmental Conservation (NYDEC), and the National Emergency Response Center, if necessary; and
- Notify appropriate emergency, state and local agencies as detailed below:

Police Department	If there is imminent danger to human health.
Fire Department	If there is a potential for uncontrollable fire or spill or potential for toxic fumes
Hospital	If there are injuries or missing personnel.
NYDEC	If the full Contingency Plan is implemented.
Cleanup Contractor	To assist with remedial action after a release.

Table VI - 2 presents the state and local emergency agencies with their telephone numbers that may be notified in the event of an emergency.

TABLE VI - 2

Outside Notification of Major Emergencies

Safety-Kleen Systems, Inc.
Syracuse, New York

AGENCY	TELEPHONE
Safety-Kleen's 24-hr EHS Department	(800) 468-1760
Emergency Police and Fire	911
East Syracuse Fire Department	315-437-3541
Onondaga County Sheriff	315-435-2111
St. Joseph's Hospital	315-448-5111
Environmental Products and Services Co.	800-843-8265 (24-hr)
New York Department of Environmental Conservation - Oil and Chemical Spills Hotline (24 hours)	(800) 457-7362 (In state) (518) 457-7362
National Emergency Response Center	(800) 424-8802

4.5 Control Procedures

Response actions to be taken in specific situations are described in this Section. An outside contractor may undertake these remedial actions. Incidents such as a fire, explosion or release of hazardous waste or hazardous waste constituents that could threaten human health or the environment will be expeditiously reported to the emergency coordinator who will then decide the extent to which the Contingency Plan should be implemented.

4.5.1 Incidental Spills

Responses to incidental spills do not require implementation of the full Contingency Plan. The following actions will be taken in response to such a situation. If a spill should occur while pouring spent parts washer solvent into a drum washer/dumpster unit or filling containers with parts washer solvent product at the return and fill station and it is contained in the secondary containment system at the base of the return and fill station, actions will be taken promptly to remove the solvent from the containment system. Should the spill occur outside secondary containment, different actions will be taken depending on whether the spill occurs on a paved or unpaved area.

- If the parts washer solvent spills on a paved area, it must be collected with sorbent materials. The inert sorbents will be collected and containerized for proper management.

- If the parts washer solvent spills on an unpaved area, the free solvent will be collected with sorbent material. The sorbent material and any contaminated soil will be collected and containerized for proper management.

- If a spill occurs while moving or delivering containers outside of the warehouse, the response actions described above will be followed. Spills inside the warehouse container transfer management areas will be prevented from contaminating the environment by the concrete flooring and secondary containment systems.

Should the incidental release exceed ten (10) pounds or should it meet any other relevant reporting threshold, the emergency coordinator will properly report the event. The emergency coordinator reporting a spill should be prepared to give his name, position, company name, address, telephone number, time and date. He should also describe the extent of injuries, material spilled, source and, if possible, an estimate of the amount, extent of any contamination and the containment status. More detailed reporting requirements are contained in Section 9.0.

The emergency coordinator will oversee remediation of incidental releases. At the conclusion of the remedial efforts, the emergency coordinator will visually inspect the spill area to assess whether the on-site response actions were successful in ameliorating impact to the environment.

4.5.2 Major Spills

Any spill that cannot be completely remediated using the methods described above is a major spill. A major spill can be a result of a vehicular accident, tank overfilling, equipment failure, an inability to identify the chemical released, or release of materials that pose significant health hazards, explosion or a fire. Spilled material, which escapes collection, could potentially contaminate soil, surface water, groundwater, sanitary sewer systems, and storm sewer systems.

If a major spill occurs, personnel must notify the emergency coordinator as soon as practicable. Safety-Kleen will be in compliance with all OSHA requirements for personal protective equipment including respiratory protection (if necessary) when responding to an emergency situation. Under the direction of the emergency coordinator and after identifying and assessing the situation, emergency response to this type of spill should be as follows:

- Don protective equipment including the appropriate respiratory protection equipment;

- Assist any injured people;

- Stop or slow the flow of material (i.e., defensive actions), if possible without being exposed;

- Retain, contain, or slow the flow of the material if it cannot be stopped;

- Contact Safety-Kleen's EHS Department, the fire department (in the event of a fire or explosion), the police department (in the event of a real or potential threat to the public), the cleanup contractor, the NYDEC Oil and Chemical Spills Hotline, and if necessary the National Emergency Response Center; and

- Employ a cleanup contractor to commence recovery operations.

The emergency coordinator or the EHS Department will promptly report major emergencies. The individual reporting such an event should be prepared to give his name, position, company name, address, telephone number, time and date. He should also describe the extent of injuries, material spilled, source and, if possible, an estimate of the amount, extent of any contamination, the containment status, and specify any equipment needed. More detailed reporting requirements are contained in Section 9.0.

Any releases resulting from major emergencies (fire explosion etc.,) must be remediated. Within 30 days of the occurrence of the release Safety-Kleen must submit a remediation plan for corrective action to the NYDEC. The final response actions will be implemented following approval by NYDEC of a site-specific remediation plan. The plan will include procedures and protocols to remediate the affected area(s).

Contaminated material, resulting from remedial actions for major spills will be disposed of off-site at a properly permitted hazardous waste treatment or disposal facility. Contaminated soil, which results from a release, will also be removed as expeditiously as possible and transported off-site to a properly permitted waste facility.

4.5.3 Fires and Explosions

If a small fire occurs, personnel must act quickly with a fire extinguisher to put out the fire before it spreads without undue threat to personal safety. Such a fire would be defined as incidental and would not require implementation of the Contingency Plan. If a fire cannot be extinguished immediately or an explosion occurs, implementation of the Contingency Plan will be required. The fire department will be promptly notified and the Service Center may be evacuated.

It should be noted that Safety-Kleen <u>only</u> responds to incidental fires; that is, those fires which can <u>immediately</u> be extinguished using a fire extinguisher. Any fire that cannot be brought under control immediately, or has the potential to become uncontrollable warrants implementation of the Contingency Plan. The emergency coordinator will determine if evacuation of the facility is warranted. Should such action be taken, the emergency coordinator will:

- Activate the internal facility communication system to notify Service Center personnel for evacuation;

- Notify Safety-Kleen's EHS Department, the New York Department of Environmental Conservation (NYDEC), and the National Emergency Response Center, if necessary; and

- Notify appropriate emergency, state and local agencies deemed necessary, such as police and fire departments.

Upon review of the fire or explosion incident, police and fire officials may initiate evacuation proceedings of the neighboring properties (based on guidance detailed in the ERG). Any fire or response actions undertaken by off-site emergency response personnel will be required to wear the appropriate personal protective equipment.

Fire response efforts will be assisted by the water-based sprinkler system installed throughout the office, warehouse and return and fill areas. This system is further supported by dry-chemical fire suppression systems in the hazardous waste storage tank area. Fires in these areas should be controlled by these engineered features.

The emergency coordinator reporting a fire or explosion should be prepared to give his name, position, company name, address, telephone number, time and date. He should also describe the type of incident, extent of injuries, material, source and, if possible, an estimate of the amount, extent of any contamination, the containment status, and specify any equipment needed. More detailed reporting requirements are contained in Section 9.0.

Contaminated material, resulting from remedial actions for fires or explosions will be disposed of off-site at a properly permitted hazardous waste treatment or disposal facility. Contaminated material that results from a fire or explosion will be removed as expeditiously as possible.

4.6 Prevention of Recurrence or Spread

Quick response to a fire, explosion or release is the primary method by which recurrence or spread of fires, explosions or releases can be prevented. Specific actions to prevent the recurrence or spread of fires, explosions or releases include determining the source or cause of the incident; ceasing operations and turning off all feed lines, auxiliary fuel lines, and power supply to the affected area; cleaning up debris from the situations and maintaining good housekeeping; containing and collecting released waste; recovering and isolating affected containers; ensuring that a fire is completely extinguished; and decontaminating the affected area/equipment.

Examples of further measures to prevent the recurrence or spread of fires, explosions or releases include: prohibiting smoking except in designated areas; properly segregating wastes in accordance with USDOT regulation 49 CFR 177.848; and protecting the waste management/storage areas from open flames, cutting and welding activities, hot surfaces and frictional heat.

4.7 Storage and Treatment of Released Material

The Service Center maintains an adequate supply of containers to manage remediated material that may be generated as a result of response actions. This material will be managed in the same manner as on-site generated wastes and will be transported to a Safety-Kleen Recycle/Process Center or contract processor as expeditiously as possible.

Leaking or damaged containers will be overpacked into appropriately sized recovery drums. The Syracuse facility maintains an adequate supply of these recovery drums.

4.8 Incompatible Wastes

No wastes that are incompatible with spilled or released material may be received by the Syracuse facility until the emergency coordinator determines that the hazards posed by the response event have been fully ameliorated.

4.9 Post-Emergency Equipment Maintenance

Following its use, non-disposable personal protective and response equipment owned by Safety-Kleen will be decontaminated with a soap and water solution and thoroughly rinsed. The emergency coordinator will visually inspect Safety-Kleen's response equipment after decontamination for residual contamination, damage, excessive wear, and proper operation. If equipment shows signs of residual contamination, the emergency coordinator may request that the equipment be decontaminated again or if these procedures fail to decontaminate the particular item, the emergency coordinator may choose to dispose of the item using the Service Center's handling, storing and disposing procedures. If an emergency equipment item is damaged and cannot be repaired, the emergency coordinator will instruct the post-emergency maintenance personnel not to decontaminate the item and to dispose of the item using the proper procedures. The emergency coordinator will order replacement equipment for any disposed equipment and make arrangements to repair any inoperable equipment as soon as practicable.

4.10 Container Spills and Leakage

Upon discovery of any spills or leaks, precautions to protect personnel in the immediate area will be taken. If necessary, the area will be isolated. Responding personnel will select and utilize the proper protective equipment and will attempt, if feasible, to stop the leak by plugging the hole or by changing the position of the container. Personnel will take precautions so as not to drive or walk into or through any spilled materials. Spills and leakage from containers holding waste will be collected and placed into a new container. Damaged containers will be placed in overpack containers, relabeled and marked accordingly. Cleanup in the warehouse container transfer management areas may include:

- use of sorbent material;
- dry sweeping;
- shoveling;
- pumping;
- damp mopping and wipe down;
- complete wash-down; or
- a combination of the above.

Rupture of a container at the Service Center will elicit a response that is proportional to the seriousness of the release. Spilled liquid wastes will be stabilized with sorbent material. Solid wastes and sorbent material used to capture spilled residual liquids will be placed into new containers.

If a slow container leak is detected, the entire container will be overpacked into an appropriately sized recovery drum, relabeled and marked. The Service Center inspection procedures assure that adequate spill cleanup equipment is available for spill containment and cleanup. The specific actions to be taken in response to incidental or major spills or leaks are described in Section 4.5.1 and 4.5.2, respectively.

4.11 Tank Spills and Leakage

In the event of a release involving any portion of the waste parts washer bulking system, the operator will stop the flow of waste into the bulking system and notify the emergency coordinator. The system will then be inspected to determine the cause and extent of the release. Based on this inspection, additional measures may be necessary to prevent further migration of the release. The actions to be taken in response to an incidental release from the tank system are described in Section 4.5.1. Actions to be taken in response to a major release from the tank system are described in Section 4.5.2.

A release related to the storage tank system would most likely collect into the secondary containment systems of the tank transfer area, the tank or the return and fill station. Any released material in the secondary containment systems will be removed within 24 hours or as expeditiously as possible to prevent harm to human health or the environment. The secondary containment systems will prevent migration to soils and surface waters.

5.0 EQUIPMENT OR POWER FAILURE

The Service Center is designed to be a passive waste management facility. Much of the material handled at the facility is contained in small containers and manually moved from storage to transport. The spent parts washer solvents that are unloaded into the dumpster/washer unit depend upon a pump for transfer to the storage tank. If the power or transfer equipment fail this operation would be halted. If the operation could not be resumed within a short time period, deliveries may be rerouted to another Service Center.

6.0 EMERGENCY EQUIPMENT

The following list of emergency equipment is in easily accessible locations throughout the Service Center. Figure VI - 2 shows the locations of the emergency equipment. Much of this equipment is inspected once per week.

Gloves – Neoprene gloves are to be used when handling wastes. The gloves provide personal protection and chemical resistance.

Safety Goggles or Glasses/Face Shields - Whichever the worker prefers, is to be worn when loading or unloading solvents at the return and fill station.

Coated Tyvek Aprons - Available for the situations where wastes may get on the worker's clothing.

Eye Wash Stations – Are available at various locations to provide quick flushing of eyes that have been exposed to injurious chemicals. The eye wash stations are located inside the Service Center and in the tank farm area and are easily accessible to employees.

Emergency Shower - To provide quick flushing of personnel that have been exposed to injurious chemicals. Emergency showers are located inside the Service Center and are easily accessible to employees.

Fire Extinguishers - The Service Center has 10-pound ABC extinguishers located throughout the facility. An ABC extinguisher is a universal system that may be used on paper, wood and electrical, as well as solvent fires. Additionally, the office and entire warehouse area and return and fill station are serviced by a water-based fire suppression system. The Area North transfer waste management area and the hazardous waste storage tank are supported by a dry-chemical fire suppression systems.

Sorbent Material - An adequate supply of inert sorbent will be on hand to handle incidental spills. These are located in the loading/unloading areas and in the container management areas.

Respiratory Protection Equipment - Respirators are selected and used on the basis of the hazards to which employees are potentially exposed. Dedicated and properly fit-tested respirators are provided to employees requiring their use.

Spill Cleanup Equipment - Shovels, mops and empty containers are readily available to collect spills and spill residues.

First Aid Kit - A First Aid Kit is centrally located in the Service Center. It contains disinfectant, bandages and other medical aids for minor injuries and health problems.

Hand-held Pump - At least one is available on-site to collect spills and transfer materials from one container or tank to another.

Communication Equipment - Telephones with loudspeaker/paging systems are available in the building for internal and external communications.

Personnel Alarms - Personnel alarms are located near the warehouse transfer container management areas and the storage tank area with an annunciator panel located in the front office.

Decontamination Equipment - Decontamination equipment consisting of brushes, detergent and wipes are kept on-site for decontamination of cleanup equipment.

7.0 COORDINATION AGREEMENTS

Within 30 days of NYDEC approval of this plan, arrangements will be made with the police department, fire department and local emergency teams to familiarize them with the layout of the Syracuse Service Center, the properties of hazardous materials handled and associated hazards, locations where Service Center personnel work, entrances to and roads inside the Service Center, and possible evacuation routes. A copy of the Contingency Plan will be sent to the agencies listed below:

- Police Department;
- Fire Department;
- Local Hospital; and
- Cleanup Contractor.

Copies of the transmittal letters will be maintained at the facility.

8.0 EVACUATION PLAN

The Syracuse Service Center exits are clearly marked and employees are aware of the potential escape routes. Posted in several locations at the facility is a figure showing available exits from the area and the direction to the personnel staging area. The emergency evacuation routes for the Service Center are included on Figure VI - 3.

In the event of a major emergency, the on-site emergency coordinator may signal personnel to evacuate the Service Center by sounding the alarm and verbally announcing the evacuation over the loudspeaker. Personnel will evacuate in an orderly fashion to the staging area directly across from the main access gate to the facility on Green Mountain Drive. The police and fire departments will be informed of the evacuation from a safe, on-site location or from a neighboring facility. Everyone will remain at the staging area and await instructions from police and fire personnel or the on-site emergency coordinator.

If the emergency coordinator believes that a threat to human health or the environment outside the Service Center exists, he or she will notify the appropriate agencies. The emergency coordinator will be available to help the appropriate officials decide if evacuation of the neighboring properties is necessary. These evacuation proceedings will be initiated by the police department or the fire department.

9.0 REPORTING REQUIREMENTS

In the event of an incidental release that exceeds the previously described thresholds, the emergency coordinator must notify Safety-Kleen’s EHS Department. The EHS Department or emergency coordinator will notify NYDEC. For major emergencies the emergency coordinator or EHS Department will notify the necessary and required parties listed in Table VI - 2.

When NYDEC is contacted, the reporting individual must be prepared to provide the following information:

a. Name and telephone number of notifier;

b. Name and address of the facility;

c. Time and type of incident;

d. Name and quantity of material(s) involved, to the extent known;

e. Extent of injuries, if any; and

f. The possible hazards to human health or the environment outside the facility.

The emergency coordinator must document the time, date and details of any incident that requires the implementation of the Contingency Plan. Within 5 days of the incident, a written report, detailing the circumstances of any incident that requires the implementation of the Contingency Plan will be submitted to the NYDEC. The report will include:

a. Name, address and telephone number of the owner or operator;

b. Name, address and telephone number of the facility;

c. Date, time and type of incident;

d. Name and quantity of material(s) involved;

e. Extent of injuries, if any; and

f. An assessment of actual or potential hazards to human health or the environment; and

g. An estimated quantity and disposition of recovered materials that result from the incident.

Following response to a major emergency that requires implementation of the Contingency Plan, Safety-Kleen will notify the Regional DEC office that the Service Center is in compliance before operations are resumed in the affected areas of the facility. As necessary, training will be performed to minimize the potential for reoccurrence of the emergency. Emergency equipment will be inspected and operable prior to the resumption of operations.

10.0 POLLUTION INCIDENT HISTORY

There are no records of a major pollution incident having occurred at this facility.

11.0 AVAILABILITY AND REVISION OF THE CONTINGENCY PLAN

This Contingency Plan is kept at the Syracuse Service Center and is updated when there are changes to the facility that may affect the Plan. Copies of this document and all revisions are provided to local authorities and organizations listed in Section 7.0. In addition, this Contingency Plan, and revisions to this Contingency Plan, are made available to the manager, supervisors and emergency response personnel as well as employees working at the Service Center. The Contingency Plan is reviewed and updated, if necessary, whenever:

- The Service Center's Permit is modified to allow new wastes to be stored or treated, or applicable regulations are revised;

- The list or location of emergency equipment changes;

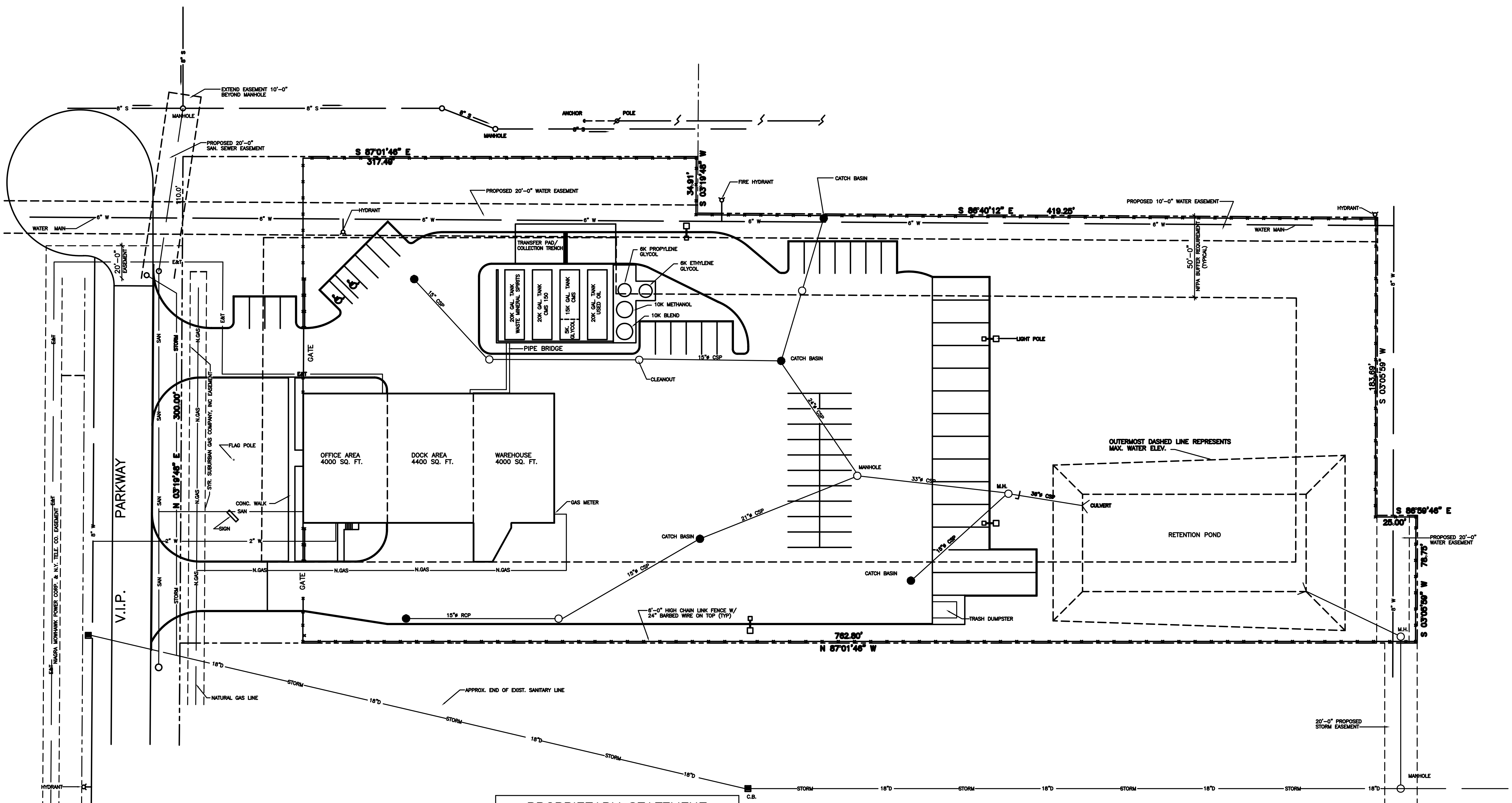
- The Service Center changes in its design, construction, operation, maintenance, or other circumstances in a way that increases the potential for fires, explosions, or releases of hazardous waste or hazardous waste constituents, or changes the response necessary in an emergency;

- The names, addresses, or phone numbers of emergency coordinators change; or

- The Contingency Plan fails when implemented in an emergency.

FIGURE VI-1

SITE PLAN



PROPRIETARY STATEMENT

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Project Solutions Companies

1390 Boone Industrial Drive • Suite 200 • Columbia • MO 65202 • Phone: (573) 443-7100 • Fax: (573) 443-7181 •

GENERAL NOTES

1. NON-PERMITTED AREAS MAY CHANGE.

NO.	DESCRIPTION	BY	CHK	APPR	DATE
C	REVISE TANK LAYOUT	JEK	MH	MH	042810
B	ADD W.W.F. TANKFARM	JEK	MH	MH	080708
A	RELEASED FOR PART "B" PERMIT	MBH	KJM	-	081792

REVISIONS

TITLE

SITE PLAN
EXISTING

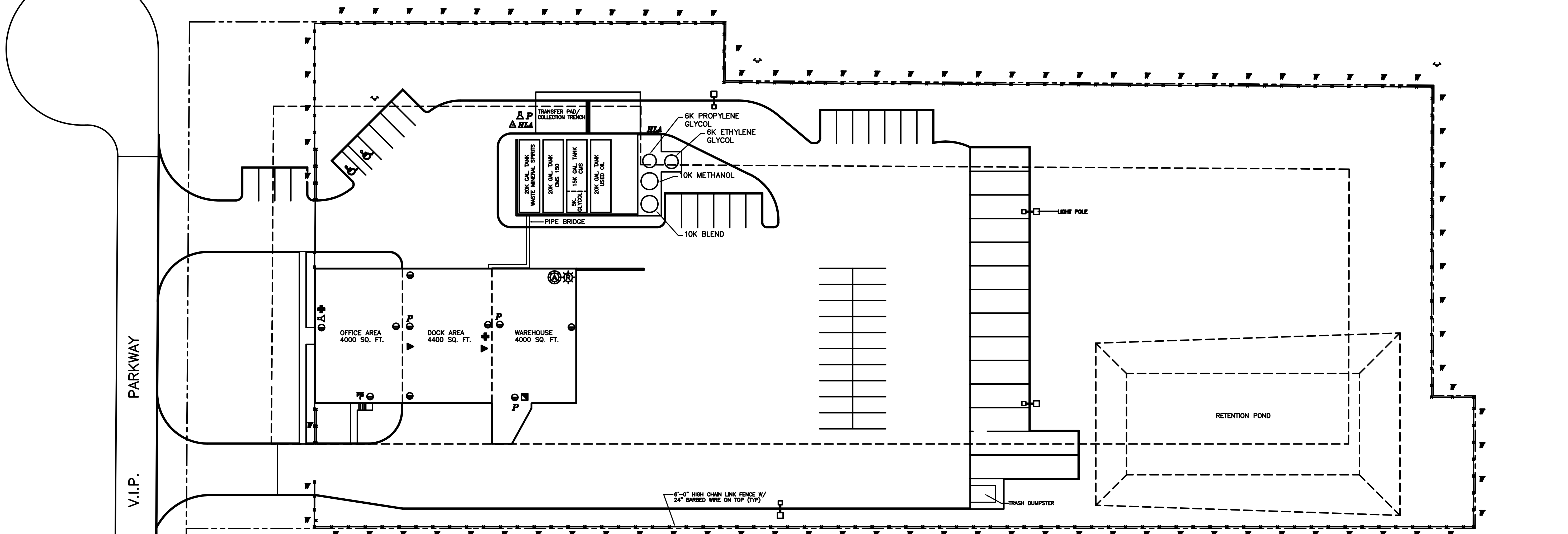
SAFETY-KLEEN SYSTEMS, INC.
5400 LEGACY DR. CLUSTER II BLDG. 3 PLANO, TX. 75024 800-669-5740

SCALE	BY	CHKD	APPROVED	OPERATIONS	DATE
1"=30'-0"	MBH	KJM	-	-	08-11-92

SERVICE CENTER LOCATION	SC-DWG NUMBER	REV. NO.
SYRACUSE, N.Y.	7051-SP00-001	C

FIGURE VI-2

EMERGENCY EQUIPMENT



LEGEND:

- DRY CHEMICAL FIRE EXTINGUISHER - HAND HELD TYPE (10 # ABC)
- FIRST-AID KIT
- SAFETY SHOWER WITH EYE WASH FOUNTAIN
- EYEWASH ONLY OR HANDSPRAY
- SPILL BOX
- SPRINKLER ALARM
- ALERT (HORN)
- SPRINKLER RISER
- HYDRANT - WATER
- PULL STATION
- P PANIC BUTTON
- HLA HIGH LEVEL ALARM
- WARNING SIGN

GENERAL NOTES

1. NON-PERMITTED AREAS MAY CHANGE.
2. ACTUAL EQUIPMENT LOCATION MAY VARY DUE TO CONSTRUCTION AND/OR MAINTENANCE/UPKEEP OF FACILITY.

PROPRIETARY STATEMENT

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NO.	DESCRIPTION	BY	CHK	APPR	DATE
C	REVISE TANK LAYOUT	JEK	MH	MH	042810
B	ADD W.W.F. TANKFARM	JEK	MH	MH	080708
A	RELEASED FOR PART "B" PERMIT	MBH	KJM	-	081792

REVISIONS

TITLE

EMERGENCY EQUIPMENT LOCATION PLAN

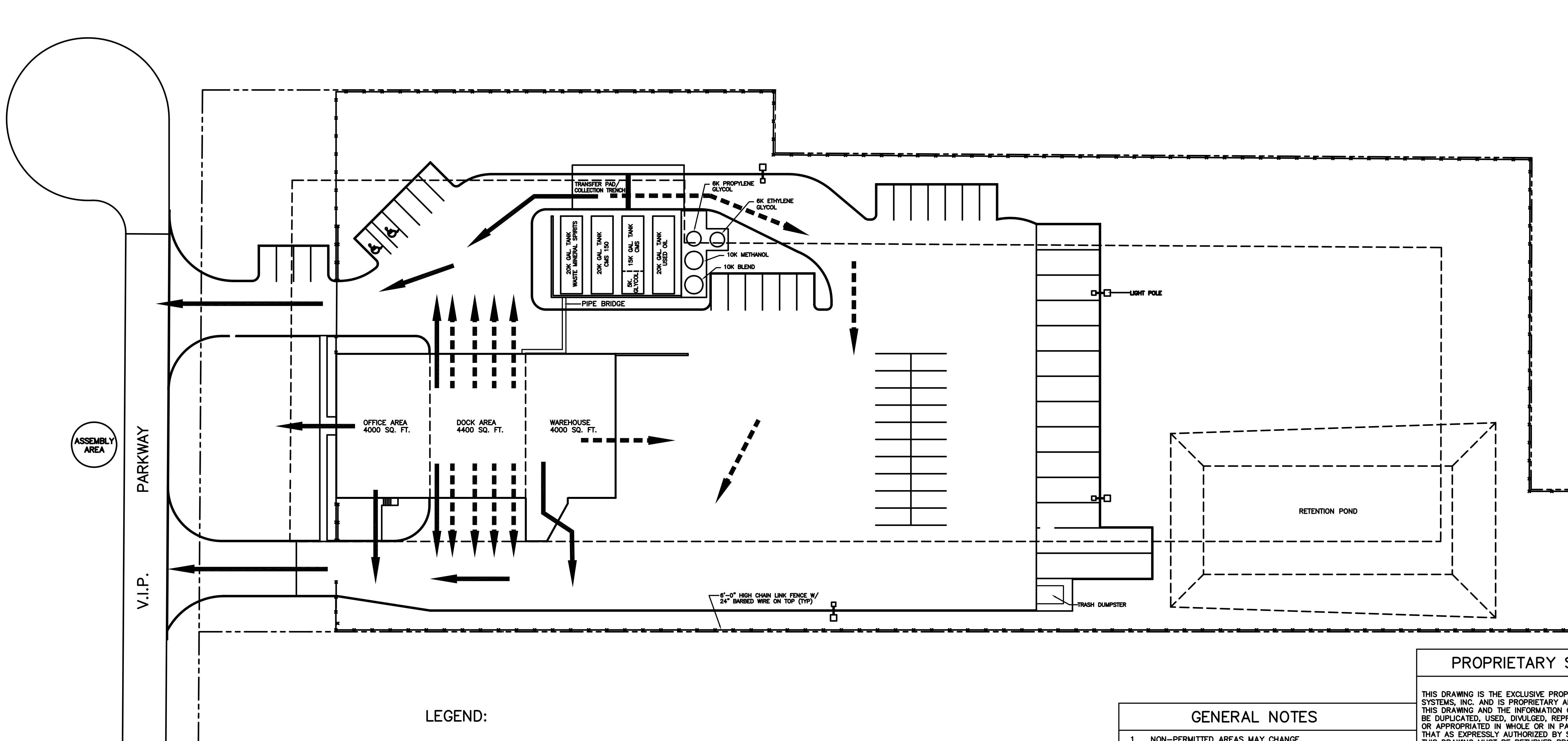
SAFETY-KLEEN SYSTEMS, INC.
5400 LEGACY DR. CLUSTER II BLDG. 3 PLANO, TX. 75024 800-669-5740

SCALE	BY	CHKD	APPROVED	OPERATIONS	DATE
1"=30'-0"	R.D.	KJM			08-14-92

SERVICE CENTER LOCATION	SC-DWG NUMBER	REV. NO.
SYRACUSE, N.Y.	7051-SP00-005	C

FIGURE VI-3

EMERGENCY EVACUATION ROUTES



LEGEND:

PRIMARY ROUTE

SECONDARY ROUTE

GENERAL NOTES

1. NON-PERMITTED AREAS MAY CHANGE.

PROPRIETARY STATEMENT

Project Solutions Companies
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• Phone: (573) 443-7100 • Fax: (573) 443-7181 •

TITLE

EMERGENCY EVACUATION PLAN

SAFETY-KLEEN SYSTEMS, INC.
5400 LEGACY DR. CLUSTER II BLDG. 3 PLANO, TX. 75024 800-669-5740

SCALE	BY	CHKD	APPROVED	OPERATIONS	DATE
1"=30'-0"	MBH				08-13-92

SERVICE CENTER LOCATION	SC-DWG NUMBER	REV. NO.
SYRACUSE, N.Y.	7051-SP00-002	C

NO.	DESCRIPTION	BY	CHK	APPR	DATE
C	REVISE TANK LAYOUT	JEK	MH	MH	042810
B	ADD W.W.F. TANKFARM	JEK	MH	MH	080708
A	RELEASED FOR PART "B" PERMIT	MBH	KJM	-	081792

REVISIONS

SAFETY-KLEEN SYSTEMS, INC.
SYRACUSE SERVICE CENTER

ATTACHMENT VII

CLOSURE PLAN

ATTACHMENT VII

CLOSURE PLAN

ABSTRACT

LOCATION ADDRESS: Safety-Kleen Systems, Inc.
6741 VIP Parkway
Syracuse, New York 13211

EPA ID#: NYD 982743312

WASTE MANAGEMENT UNITS TO UNDERGO CLOSURE:

a. One 20,000-gallon aboveground steel storage tank with secondary containment.

b. Return and Fill Station - one parts washer solvent management area. This area has a capacity of 750 gallons.

c. A container storage area on the return and fill dock. This area stores 2400 gallons of hazardous waste

d. Former container storage area converted to a 10-day transfer area with a storage capacity of 6,912 gallons.

CLOSURE PERFORMANCE STANDARDS:

Safety-Kleen will close the facility in a manner that:

a. Minimizes the need for further maintenance and,

b. Controls, minimizes or eliminates, to the extent necessary to protect human health and the environment, post closure escapes of hazardous waste, hazardous constituents, leachate, contaminated runoff or hazardous waste decomposition products to the ground, surface waters, or the atmosphere.

The closure performance standard will be accomplished by removing all hazardous waste in Safety-Kleen's inventory at the time of closure, decontaminating equipment and containment systems, and post closure sampling and analysis.

This plan provides for removal of the storage tank and concrete slab at the time of closure. However, provided that the tank and slab do not need to be removed to address remediation of contaminated soil, Safety-Kleen may elect to keep the tank and slab in place after closure activities have been completed and approved by the NYDEC.

ATTACHMENT VII - CLOSURE PLAN

The Syracuse Service Center operates as a storage and USDOT transfer facility for hazardous and non-hazardous wastes, and it is required that it be closed in accordance with the closure requirements of 6NYCRR Section 373-2.7. Closure of the facility will be carried out in accordance with the steps outlined in this plan. Safety-Kleen will remove hazardous wastes and hazardous waste residuals from the facility. This manner of closure will eliminate the need for further maintenance and eliminate threats to human health and the environment due to post closure release of hazardous waste, constituents or contaminated rainfall to the ground or surface waters or to the environment.

1.0 ABOVEGROUND TANK AND ASSOCIATED PIPING

To safely clean and decommission the aboveground storage tank:

a. Remove the remaining material from the tank and return the materials to a Recycle/Process Center for reclamation.

b. Provide access to the tank.

c. Rinse, scrape and squeegee the tank interior, removing residual waste material and rinsate. Decontamination of the tank will continue until analyses demonstrate that contaminants in the rinsate are below ground water standards.

d. Remove tank and appurtenant equipment to reuse or sell as scrap

e. Disconnect and decontaminate appurtenant piping and pumping equipment.

f. Clean and raze the diking and slab. If soil sampling reveals contamination and contaminated soil is removed, backfill excavation with clean fill materials.

g. Backfill excavations with clean fill material.

h. Transport and dispose of waste material generated during the project.

1.1 Removal of Waste Material and Opening of Tank

The contents of the tank will be removed using a pump, vacuum truck or similar equipment and will then be shipped to a reclaimer. The manway will be used to gain access to the aboveground tank. Depending on the type of opening and the condition of the equipment, a variety of tools may be used to open the manway. Care will be exercised to minimize spark generation when working on the tank. Equipment used to work on the tank will be spark proof.

Prior to entering the tank, personnel will have the proper respiratory protection and protective clothing. Once the tank has been opened, it will be provided with positive ventilation. The tank will then be inspected to determine the approximate quantity and physical conditions of any remaining waste material.

1.2 Removal of Residual Waste and Cleaning of Tank

Before removing any residual waste from the tank, piping and appurtenant equipment will be flushed with clean, hydrocarbon-based parts washer solvent followed by a detergent solution. The method used to remove the residual waste materials from the tank will depend on the physical properties and quantities of that material. Prior to any person entering the tank, an effort will be made to remove as much liquid and sediment as possible.

Subsequent to vacuuming the majority of the material from the tank, it may be necessary to use a high pressure wash system using clean solvent and a detergent solution to rinse residual material from the walls, roof, and floor of the tank. The rinse water will be analyzed for the components in Table VII - 1. Sampling methods are in Table VII – 2. The evacuated material and the rinse solution will be shipped to a reclaimer. The verification of decontamination will be based on NYDEC's regulatory clean-up standards at the time of closure. The quantity of wash fluid used will be kept to a minimum in order to limit the amount of waste material, but will be adequate to rinse the interior surfaces of the tank.

TABLE VII - 1

Closure Analysis Parameters

Safety-Kleen Systems, Inc.
Syracuse, New York

Analyte	Parameter
Residuals and wash water	Volatiles
	Semi Volatiles
	TCLP
Soil	TAGM 4046
Rinsate Test for verification of decontamination (DEC sampling method)	As determined by DEC at the time of closure based on the waste stored.
Sampling and analysis will be completed in accordance with section 3 of this attachment.	

TABLE VII - 2

Methods Used To Sample During Closure

Safety-Kleen Systems, Inc.
Syracuse, New York

Waste	Reference for Sampling	Description of Sampling Method
Residuals and Rinsate	Sampling a tank[1] "Samples & Sampling Procedures for Hazardous Waste Streams" EPA-600/ 2-80-018	Test Methods Evaluation of Solid Waste/Physical/ Chemical Methods, SW846, current edition Chapter 9
Rinsate	Sampling a drum[1,2] "Samples & Sampling Procedures for Hazardous Waste Streams" EPA-600/ 2-80-018	Test Methods Evaluation of Solid Waste/Physical/ Chemical Methods, SW846, current edition Chapter 9

[1]Sampler: Representative sample using a Coliwasa tube or other appropriate means.

[2]Sampler: Representative sample using a sample jar, stainless steel trowel, auger, shovel, or other appropriate means.

Note: The EPA Guidance Manual, *Waste Analysis At Facilities That Generate, Treat or Store and Dispose of Hazardous Wastes*, PB94-963603, OSWER 9938.4-03, April 1994, is also utilized as a reference.

The storage tank is considered a permit required confined space (i.e. spaces open or closed having a limited means of egress in which poisonous gases or flammable vapors might accumulate or an oxygen deficiency might occur), and confined space entry requires special procedures consistent with OSHA requirements:

a. Tanks are to be washed, neutralized and/or purged (where flammable atmosphere is present) prior to being entered.

b. Supply valves must be closed and tagged and bleeder valves left open; or supply piping should be disconnected.

c. Pumps or motors normally activated by automatic controls shall be operated manually to be sure they have been disconnected. Instrument power switches should be tagged “OFF”.

d. On tanks where flammable vapors may be present, sources of ignition must be removed.

e. Under circumstances where hot work (welding, burning, grinding, etc.) is to be performed in or on the vessel, a test for combustible gases shall be taken. In tank entry situations, an oxygen deficiency test shall also be performed prior to tank entry. Both tests will be performed by the supervisor of the area in which the work is being completed.

f. Under conditions where there exists a possibility (no matter how remote) of toxic vapors being present in the tank to be entered, the supervisor will arrange to have the air tested. The results of tests will be displayed on site.

g. If tank entry is performed under IDLH conditions, rescue equipment must be at the job site to if it becomes necessary to perform a rescue. Any other rescue equipment considered necessary must also be on the job site.

h. Workers should wear rescue harnesses if entering a tank with a large enough opening to easily perform a rescue. In tanks with small openings, only wristlets may be used. In cases where there are agitator shafts, drums or other hazards in which the man's lifeline would be entangled and the supervisor in charge feels that wearing the lifeline may entrap a man and increase the hazard, the wearing of a harness or wristlets may be eliminated.

i. A constant source of fresh air must be provided to ensure a complete change of air every few minutes. In cases of short term entry for inspection or removal of objects, an air mask is recommended. In cases of long term entry, the use of an air mover should be considered.

j. When a ladder is required to enter a tank, the ladder must be secured and not removed while anyone is in the vessel. In cases where a rigid ladder could become an obstacle, a chain ladder may be used.

k. Adequate illumination must be provided and a flashlight or other battery operated light must also be on hand to provide illumination for a safe exit in the event of an electrical power failure.

l. Electrical equipment to be used inside the tank must be in good repair and grounded.

m. Other people working in the immediate area will be informed of the work being done, and they must inform the watcher or supervisor immediately of any unusual occurrence which makes it necessary to evacuate the tank.

n. The Watcher or Standby Observer System must be implemented. It consists of the following:

    (1) Workers inside a confined space must be under the constant observation of a fully instructed watcher.

(2) Before anyone enters the tank, the watcher will be instructed by the person in charge of the entry that an entry authorization must be obtained from the person in charge and a rescue harness or wristlets must be used on the job.

(3) The watcher must also know the location of the nearest telephone (with emergency numbers posted), eyewash and/or safety shower, fire extinguisher and oxygen inhalator. For all hot work inside a tank, the watcher must be instructed how to shut down the welding/burning equipment.

(4) As long as anyone is inside the vessel, the watcher must remain in continuous contact with the worker. *HE IS NOT TO LEAVE THE JOB SITE EXCEPT TO REPORT AN EMERGENCY***.** He does not enter the tank until help is available.

(5) After being instructed in his responsibilities, the watcher will sign a form indicating his understanding.

o. Welding and burning equipment must be provided with a shutoff under the control of the watcher; and the watcher must be shown how to shut off the equipment if it becomes necessary. Welding and burning equipment will only be taken into a tank immediately prior to its use and must be removed from the tank immediately after the job is finished.

p. For hot work inside a tank, a properly executed flame permit, if needed, must be displayed at the job site and standard welding and burning safety precautions will always be followed.

q. Proper “lockout/tagout” procedures will be followed for electrical equipment connected to the tank.

r. The diking and slab will be cleaned using a high pressure wash system with detergent followed by clean rinse. Wash and rinse water will be analyzed for the solvent stored and reclaimed or properly disposed of. Sampling parameters and methods are in Tables VII - 1 and VII - 2, respectively.

1.3. Removal of the Tank

To safely remove the tank:

a. Disconnect appurtenant piping

b. Disconnect appurtenant pumping equipment

c. Vessels shall be removed and reused or cut up and sold as scrap

d. The diking and slab will be cleaned using a high pressure wash system with detergent followed by clean rinse. Wash and rinse water will be analyzed for the solvent stored and reclaimed or properly disposed of. Sampling parameters and methods are in Tables VII - 1 and VII - 2, respectively. Raze the diking and slab and inspect the excavation. Examine soils using a photoionization detector. If contamination is indicated, confirm with laboratory analyses, determine the extent of contamination with a soil study and excavate soils down to clean soils.

e. Backfill the excavation with clean fill materials and grade to ground level.

1.3 Tanker Loading/Unloading Area

The tanker truck loading and unloading area located immediately adjacent to the tank, and the onsite container storage area in the warehouse will be decontaminated. The concrete floor, containment berms and containment trench will be cleaned with a high pressure wash system using a detergent solution followed by a clean rinse. The rinsate will be analyzed for the parameters listed on Table VII - 1 for disposal. The cleaned area will be sampled and analyzed in accordance with Section 3 below to determine the completeness of cleaning. Any other wastes generated in the closure process will be reclaimed or properly disposed.

1.5 Drum Storage Area in the Return and Fill

The return and fill area is used for the storage of spent part washer solvents. At closure all drums will be removed and transported to a solvent reclaimer. As described below, the concrete floor will be pressure washed using detergent solution followed up by a clean rinse. The rinsate will be analyzed for the solvent stored. The verification of decontamination will be determined by the NYSDEC Rinsate test or any other method determined at the time of closure as described in Section 3.0 - Sampling and Analysis for Final Closure.

1.6 Formerly Permitted Container Transfer Area

At closure all drums will be removed and transported to a reclaimer or disposal facility. The concrete floor and spill containment areas will be power washed with detergents followed by a clean rinse. The rinsate will be analyzed and disposed of accordingly. Parameters and methods of analyses will be determined based on the types of waste stored. The verification of the effectiveness of decontamination will be determined as described in Section 3.0.

2.0 PARTS WASHER SOLVENT RETURN AND FILL STATION/CONTAINER STORAGE AREA

The return and fill station is used to collect and return the used Safety-Kleen solvents to the waste storage tank. Closure of the return and fill station will be made prior to the cleaning and removal of the storage tank. At closure, all containers of waste will be removed and the sediment in the dumpsters will be removed and drummed, labeled, and manifested and shipped to a reclaimer.

The dumpster and dock area will be thoroughly rinsed with a detergent solution. The rinsate will be discharged through the appurtenant piping system into the storage tank, which will be subjected to separate closure procedure as described earlier. The rinsate will be analyzed as per Tables VII-1 & VII-2. The clean dumpster and dock structure may be reused by Safety-Kleen or scrapped.

3.0 SAMPLING AND ANALYSIS FOR FINAL CLOSURE

The final and specific choice of sampling points, number of samples, type of sampling performed and post closure cleaning analysis will be determined at the time of closure by NYDEC. These determinations will be based upon the past history of operating practices and types of wastes handled at the facility. The operating record, the records of spills, the types of waste released, location of spills in the facility and the condition of secondary containment systems (e.g., stains, cracks, etc.) will also provide data used in these determinations. The flexibility afforded by this approach will allow compliance with closure regulations and requirements that will be in effect at the time of closure. Different sampling procedures may be considered at closure and the locations and the total number of sampling required will be determined based on the information gathered at the time of closure. The verification of decontamination will be based on NYDEC's regulatory clean-up standards at the time of closure.

4.0 FACILITY CLOSURE SCHEDULE AND CERTIFICATION

This Service Center stores wastes and manages material in transit for a limited amount of time before they are removed to a recycling or processing center. At that time, more wastes are brought to the Service Center for management. This schedule of operation will not result in the facility reaching maximum storage capacity and ceasing operation. Safety-Kleen does not plan to close the facility in the foreseeable future. Therefore, the date of the closure will be sometime after the year 2025.

Within 90 days of receiving the final volume of hazardous waste, Safety-Kleen will remove hazardous wastes from the site in accordance with the approved closure plan. The New York State Department of Environmental Conservation may approve a longer period if Safety-Kleen demonstrates that the activities required to comply will, of necessity, take longer than 90 days to complete; provide the following requirements are met:

a. The facility has the capacity to receive additional wastes.

b. There is a likelihood that a person other than Safety-Kleen will commence

c. Closure of the facility is incompatible with continued operation of the site. In this case, Safety-Kleen will take steps necessary to prevent threats to human health and the environment.

Safety-Kleen will complete closure activities in accordance with the approved closure plan and within 180 days after receiving the final volume of wastes. Periodic inspections will be made during closure by an independent registered professional engineer.

Safety-Kleen must notify the commissioner in writing at least 60 days prior to the date on which it expects to begin closure or partial closure of any hazardous waste management unit or the facility. The estimated cost for conducting closure is summarized in Table VII - 3.

When closure is completed, Safety-Kleen shall submit to the New York State Department of Environmental Conservation, certification, both by the operator and by the independent registered professional engineer registered in New York State, that the facility has been closed in accordance with the approved closure plan.

TABLE VII - 3

Closure Costs Estimate

Safety-Kleen Systems, Inc.
Syracuse, New York

TABLE VII-3
CLOSURE COST ESTIMATE
SAFETY-KLEEN SYSTEMS,INC
SYRACUSE, NEW YORK

A. TANK CLOSURE		
PHASE I		
Ship Contents - 20, 000 gallons of spent mineral spirits for disposal		
Tank size - 20,000 gallons - 6000 gallons/truck - 4 trucks		
4 trucksx300 miles x $6.00/mile		7200
Disposal cost - 20,000x0.59		11800
	Subtotal	19000
Squeegee Clean Tank		
1 Foreman $42.00/hrx24 hrs		1008
1 Labor $31.00/hr+3.00 hazard payx24 hrs		816
Use high pressure water for one day		400
Disposal & transportation of wash water - 4000 gallonsx0.45		1800
Transportation of wash water -1 tankerx300 miles x $6.00/mile		1800
Testing for contamination		1500
	Subtotal	7324
TOTAL OF PHASE I - 19000+7324		**26324**
Phase II - Removal and Disposal of Tank		
1. Disconnect and remove appurtenant equipment		
1 Foreman $42.00/hrsx10 hrs		420
2 Laborers $31.00x10 hrs		620
	Subtotal	1040
2. Torch Tank		
1 Foreman $42.00/hr x 10 hrs		420
1 Laborer $31.00/hr x 10 hrs		310
	Subtotal	730
3. Remove tank		
1 Foreman $42.00/hr x 4 hrs		168
2 laborers $31.00 x 4 hrs		248
1 Backhoe $38.50/hr x 4		154
Equipment $200 lump sum		200
	Subtotal	770

		TOTAL OF PHASE II = 1040+730+770				**2540**
Phase III - Concrete Demolition						
1. Demolition of concrete pad - 200 x $95.00 cubic yd						19000
2. Removal & disposal of concrete -200 cu.yd x $6.00/cu.yd						1200
3. Hauling 20 miles round trip - 200 cu.yd x 17.4/cu.yd						3480
		TOTAL OF PHASE III				**23680**
Phase IV - Back filling, Regrading, Soil Testing						
1. Test for soil contamination (2 samples)						3000
2.Regarding						
1 F.E loader $38.50 /hr x 4 hrs						154
Equipment $500 lump sum						500
Backfill 10 cu.yrds x $5.00/cu.yd						50
Provision for disposal of 20 cu.yd. of contaminated soil 20x500						10000
						10704
		Total of Phase IV - 3000+10704				**13704**
Phase V - Truck Loading/Unloading Area						
Clean Loading/unloading area						
1 Foreman $42.00/hr x 10 hrs						420
1 Laborer $31.00/hr+3.00 hazard payx20 hrs						680
Disposal of Wash Water - 1200 sq.ftx4 gallons/sq.ftx0.45						2160
Transportation - 1 truck x 300 miles x $ 6/mile						1800
Testing for contamination						1500
			Total of Phase V			**6560**
SUMMARY						
Phase I			26324			
Phase II			2540			
Phase III			23680			
Phase IV			13704			
Phase V			6560			
Tank Closure			**72808**			
Closure of Return and fill Station (RFS)						
Remove, drum and dispose of sediment/solvent, clean the dumpster						
and dock area, remove the dumpster and dock structure for reuse or scrap						
Disposal of sediments/solvent						
Hauling cost - 300 miles x $6.00/mile						1800
Crew						

1 Foreman $42.00/hrx10hr	420
1 laborer $31.00+$3.00/hr hazard payx10 hrs	340
Clean Dumpster & dock area	
1 Foreman $42.00/hrx10hr	420
1 laborer $31.00+$3.00/hr hazard payx10 hrs	340
Use of high pressure water for one day	400
Disposal of wash water - 200 gallons x 0.45	90
Disposal of dumpster mud 15-55 gallon drums x $500	7500
Testing for contamination - 4 samples x $1500	6000
Torch, disassemble and remove dumpsters/docks	
Crew	
1 Foreman $42.00/hrx10 hrs	420
31.00/hrx10hrs	310
Equipment $10/hrx10 hrs	100
Disposal of 2400 gallons of solvents (80 thirty gallon drumsx$50)	4000
Transportation	400
Total RFS closure	**22540**
Closure of existing drum storage area (Now transfer area)	
Remove and transport waste for recycling or disposal	
Hauling cost - 2 loadsx300 milesx$6.00	3600
Cleaning drum storage area	
Crew	
1 Foreman $42.00/hrx10 hrs	420
1 laborer $31/hr+$3.00/hr hazard pay x 20 hrs	680
Collection of wash water - vacuum truck rental	1600
Disposal of wash water 1200 sq.ftx4 gallons/sq.ftx0.45	2160
Disposal of spent solvent 432 - 16 gallon drumsx$30/drum	12960
Testing for contamination - 2 samples x $1500	3000
Existing drum storage closure	**24420**
PE Certification	**1500**
SUMMARY OF CLOSURE COST	
Cost estimate for closure of the 20,000 gallon tank	72808
Cost estimate for the closure of the RFS area	22540
Cost estimate for closure of existing drum storage area	24420
Cost of PE Certification	1500
Total Cost of closure	121268

COST ESTIMATE FOR WHICH FINANANCIAL ASSURANCE IS REQUIRED

Total cost estimate for closure of the facility	121268
Contingency (20%)	24254

Administrative cost (15%)		18190
Cost estimate @ year 2000 cost		**163712**
Cost estimate adjusted for 2005 (163712)x1.0858)		**177758**
Cost estimate adjusted for 2010		21,255
Total cost estimate for closure of the facility		**$199,014**

SAFETY-KLEEN SYSTEMS, INC.
SYRACUSE SERVICE CENTER
EPA ID No. NYD 982743312

ATTACHMENT VIII

MANAGEMENT OF WASTE IN CONTAINERS PLAN

ABSTRACT

Purpose: The Syracuse Service Center is permitted for the management of spent parts washer waste in containers and in bulk in an aboveground storage tank. Containerized parts washer solvent routed to the facility will remain on the transport vehicles for a limited time, unloaded in the permitted container storage area to verify its contents and documentation prior to it being transferred into the bulk storage tank.

Containers are emptied into a drum washer/dumpster unit where the material is pumped to the bulk tank.

Containerized materials destined for out-of state facilities are also managed at the Syracuse Service Center as a 10-day storage exempt waste. The purpose of this plan is to describe the operational practices associated with the management of these materials.

ATTACHMENT VIII - MANAGEMENT OF WASTE IN CONTAINERS PLAN

1.0 MANAGEMENT PRACTICES

The Syracuse facility accepts containerized spent parts washer solvent from off-site generators for management. The spent parts washer solvents are transported to the facility in containers. Containers are removed from the transport vehicles and are transferred to the container staging/storage area prior to bulking the solvent into the bulk waste solvent storage tank.

The containers may be stored in trucks for a limited period of time as provided for in this permit prior to unloading into the permitted container storage area located on the Return & Fill dock. These containers are inspected for accuracy of paperwork and labels prior to being emptied into the return and fill units for conveyance into the storage tank. A 54' x 20' container storage area located in the return and fill area is available to accommodate storage of drums resulting from unforeseen delays in direct unloading of drums from the truck into the drum washer. The container storage area will be managed in accordance with 6 NYCRR Part 373-2.9. Containers stored on this grate do not need to be stored on pallets since they are elevated off the floor. The waste solvent storage capacity is 2,400 gallons (or 80 30-gallon drums) which is equivalent to the total average volume of parts washer wastes received at the facility for 1 day. Since containers of unused solvent are also stored in this permitted area, the combined total volume of product solvent and waste solvent will not exceed 6,000 gallons.

The total secondary containment in the return and fill area is approximately 4,346 gallons. The slab and curbing for the drum storage area is made of steel reinforced concrete and the concrete has been poured so that there are no cracks or gaps. The entire floor is sloped toward two stainless steel lined collection sumps and is coated with a sealant which is compatible with Safety-Kleen solvents stored in this area. Any accumulated liquid in the containment area is emptied to prevent overflows. All materials collected from spills and from the secondary containment trench will be treated as hazardous waste unless proven otherwise.

When waste containers are moved, a potential exists for the drums to tip over. To minimize the potential for spillage of solvents all containers will be maintained in an upright position and remain tightly covered while in storage or in transit. A minimum of 2' of aisle space and a maximum stack height of 6 feet will be maintained for waste containers.

If by reasons beyond the control of Safety-Kleen more drums need to be stored than the permitted quantity, Safety-Kleen will obtain prior approval from the Department to store the excess quantity within the Return & Fill building. This is subject to the available secondary containment volume

The soil below all containment structures at the facility is compacted to bear a load of 3,000 lbs/square foot. The concrete above it will not show any signs of cracking from weight stress until the weight of 3,000 lbs/square foot is reached. Therefore, the load bearing capacity is 3,000 lbs/square foot. This is more than sufficient for the container storage areas.

1.1 Management of Truck Storage of Containerized Spent Solvent Prior To Bulking and Consolidation

Spent parts washer solvents are transported to the facility in containers. The containers remain on the transport vehicles until they can be removed and their contents transferred to the container storage area and emptied into the bulk tank. This truck storage will be regulated under the permit. On Mondays, Tuesdays, Wednesdays and Thursdays, the containers are removed from the vehicles and either stored in the container storage area or the waste is transferred to the tank within 16 hours of arrival at the facility. Vehicles arriving after work hours on Fridays or holidays are off-loaded before 12:00 noon of the next working day.

Vehicles holding containers of spent parts washer solvent positioned at the facility are staged in the Service Center's parking lot. As shown on the site plan, the vehicles are parked in designated areas at least 50 feet from the property boundary. The total number of vehicles temporarily staged at the Service Center before off-loading does not exceed 15. The maximum volume of parts washer solvent waste stored on a vehicle does not exceed 2000 gallons. The total volume of parts washer wastes stored in trucks does not exceed the remaining volume available in the storage tank for transfer of the waste at any time. The vehicles are equipped with a secondary containment system designed to capture material released into the storage compartment of the vehicle. These restrictions are not mandated for vehicles in which parts-washer solvent containers are unloaded in a timely manner (i.e., within two hours).

Waste transported to the facility on Safety-Kleen vehicles is managed in accordance with applicable USDOT regulations. Hazardous materials are loaded and segregated in accordance with the *Segregation Table for Hazardous Materials* found in 49 CFR 177.848.

Spent parts washer solvents from customers are transferred to the waste storage tank via the return and fill station which consists of a two dumpster/barrel washers and pumps. Containers are manually emptied allowing the waste to flow into one of the dumpsters. After the waste is transferred into a dumpster, the container is placed on a barrel washer and sprayed with the spent solvent for washing. The washed container is kept on a stand, upside down for draining. The waste material in the dumpsters/barrel washer is pumped to the tank.

A container rinsing unit is installed immediately adjacent to the dumpster/barrel washer. The rinsing unit provides a final rinse using Safety-Kleen's 150 grade solvent for some containers that are being reused to ship clean 150 solvent to customers. The containers for which this unit is utilized are rinsed with clean solvent and drained upside down on a funnel-like device. The container rinsing unit is piped directly to the barrel washer that drains to the dumpster in order to minimize emissions and to minimize the chance of spills.

The parts washer solvent waste containers are of a specific type, size and color to distinguish them from containers accepted for 10-day exempt storage wastes at the facility. This management practice eliminates the need to conduct compatibility tests prior to bulking the parts washer solvent wastes. The parts washer containers are easily recognized. Hydrocarbon based solvents are managed in steel 16 and 30 gallon open-topped containers. These containers are USDOT UN 1A2 specification units. The hydrocarbon based parts washer solvent containers are also color coded. The 16- and 30 gallon, UN 1A2 containers are either green or red.

Aqueous based solvent are also managed in 16 and 30 gallon USDOT specification UN 1A2 open-topped containers. These steel containers are readily identified based on the blue color of the units.

In addition to the steel containers described above, a 5-gallon closed-head plastic unit is used for both hydrocarbon and aqueous based parts washer solvents. These uniquely shaped containers (USDOT specified UN 3H1) are further distinguished by color - black for hydrocarbon-based solvent and blue for aqueous-based material. Table VIII - 1 summarizes the type, size and color of the parts washer solvent containers that are used by the Syracuse Service Center.

TABLE VIII-1

Summary of Parts Washer Solvent Containers -
Container Color and Type
Safety-Kleen Systems, Inc.
Syracuse, New York

Waste Type	WASTE CODES	DRUM TYPES	SIZE OF EACH DRUM	DRUM COLOR
SK Solvents (Hydrocarbon- and Aqueous-Based)	D001, D004-D011, D018, D019, D021-D030, D032-D042, D043 and Non-hazardous	UN 1A2(steel) UN 1A2(Steel) UN 3H1 (Plastic)	16, 30 16, 30 16, 30 5	Red Green Blue Black Blue

A product label further supports the container type, size and color identification criteria. Each container of hydrocarbon and aqueous based parts washer solvent, regardless of container type, size, or color has a rectangular label affixed to it denoting its contents. The labels used are included in Appendix I. The content of these labels may change without requiring prior approval from NYDEC. However, any change in the size or color of the labels would require approval through the permit modification process from NYDEC. This descriptive label, combined with the required USDOT identification mark placed on the container prior to transport, will further augment the container type, size and color acceptance criteria. The yellow and blue labels are displayed near the drum washer/ Return & Fill station with a notice to caution the employees that only drums with yellow and blue labels displayed in the notice may be emptied into the drum washer for commingling in the tank.

Containers of parts washer waste also have waste labels attached to them before they are transported to the facility. These labels identify the material as hazardous or non-hazardous, contain generator and waste information, and have unique container identification numbers (for tracking purposes).

The specific container size, color and identification labels ensure that the spent parts washer solvents will not be contaminated by commingling with other waste managed at the facility while bulking the solvents into the storage tank. Therefore, there is no need to conduct any compatibility tests prior to bulking the waste into the tank.

1.2 Transfer Waste Management Service (for information only)

The Syracuse Service Center offers a service to collect and transport various hazardous and non-hazardous wastes from its customers. The waste is generated from a variety of processes and varies from customer to customer. These containerized wastes are managed at the facility under the 10-day storage exemption allowed in 6NYCRR Part 373, Section 373-1.1(d) (xv). They are temporarily stored in the transfer container management area of the warehouse. These exempt wastes are managed in accordance with the following:

a. The areas where the consolidation of loads takes place by moving containers from one transport vehicle to another or containers are removed from transport vehicles and managed prior to being reloaded will be designed to meet the secondary containment requirements stipulated in 6NYCRR Part 373, Section 373-2.9(f);

b. Commingling of loads by repackaging, mixing or pumping from one container or transport vehicle to another is prohibited;

c. Hazardous materials will be packaged in accordance with applicable USDOT regulations set forth in 49 CFR Parts 173, 178 and 179;

d. Hazardous materials will be classified and segregated in accordance with 49 CFR 173.2(a) and 177.848 for transport and management at the facility;

e. Lab-packs will be packaged in accordance with 49 CFR 173.12(b). The contents of labpacks are inspected by qualified personnel authorized by Safety-Kleen prior to transport to the facility

f. Hazardous and non-hazardous transfer wastes are stored on site for no more than 10 days.

g. A current inventory of all transfer waste is maintained at all times.

h. Transfer waste containers are inspected each operating day.

i. Storage areas for oxidizers, ignitable, or reactive waste are designed and provided with fire suppression systems in accordance with NFPA guidelines and the Property Management Code of New York.

j. Organic peroxides, water reactives, pyrophorics, unstable monomers, flammable metal powders, wastes classified as DOT 6.1 Zone A, and strong oxidizers (example: NFPA Class 3 and 4) are not accepted for storage by Safety-Kleen. Most oxidizers have a 1% upper limit for acceptance. Wastes with the EPA waste code of D003 are not accepted for storage with the exception of some isocyanate based urethane adhesives.

High hazard wastes including explosives, radioactives, pyrophorics, and infectious materials are not managed as transfer waste at the Cohoes facility. Prior to acceptance of a waste for management in the transfer waste program, wastes are evaluated using a defined Health and Safety Evaluation Model to establish a safe level of acceptance.

This evaluation is performed within the Safety-Kleen Technical center by the Waste Review Panel. The purpose of this review is to determine safe handling limits for all compounds entering Safety-Kleen branches, transfer facilities, and recycling facilities. The model uses the following hierarchical approach:

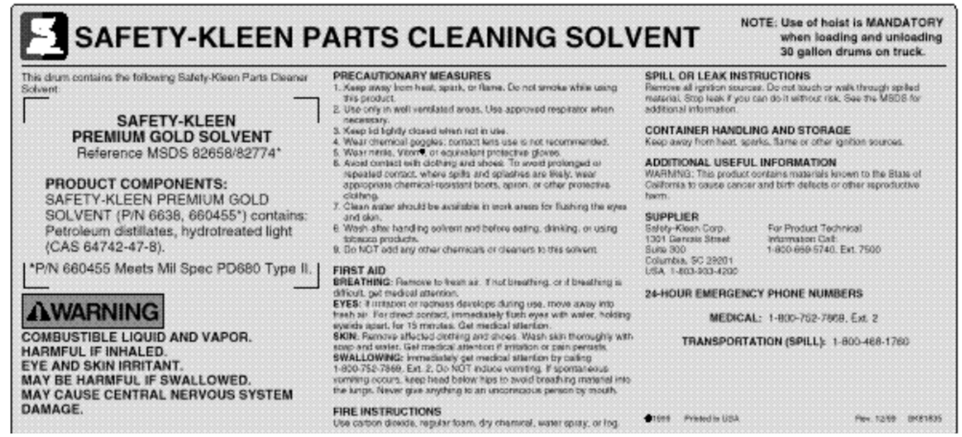
- The most conservative OSHA or ACGIH occupational exposure limits;
- Animal toxicity data; and
- Chemical class and physical/chemical properties (e.g. vapor pressure, etc).

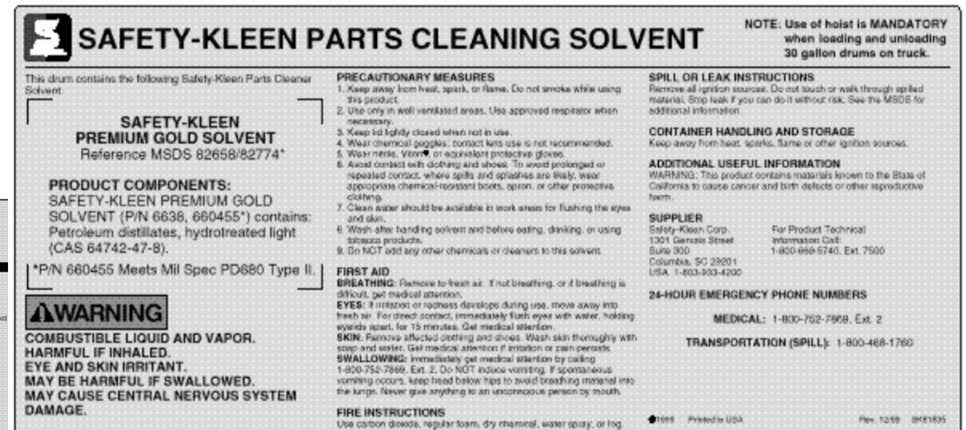
If the toxicity of a waste exceeds the protection provided by standard issue personal protective equipment (safety glasses, air purifying respirator with organic vapor/acid gas cartridges, saranax coated apron with sleeves, and nitrile gloves), the waste would not be approved for management as transfer waste at the facility.

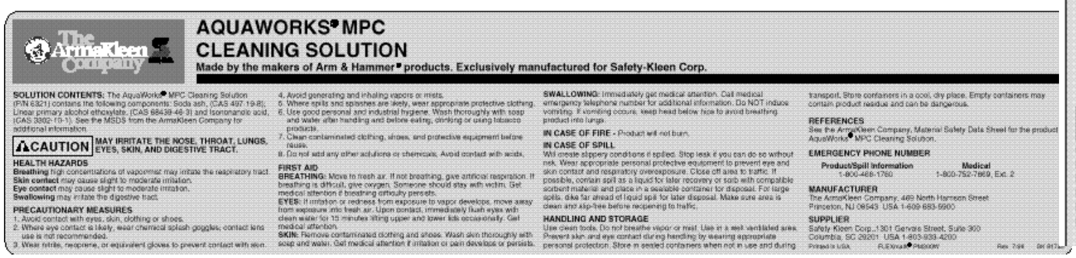
Since containers are never opened while in storage the potential for reactions between incompatible materials remains low. However, a risk does exist in the event of leaks from multiple adjacent containers. To reduce this hazard, containers are segregated in storage according to the USDOT segregation table in the hazardous materials regulations in 49 CFR 177.848. Materials that are prohibited from storage together on a transport vehicle are not stored together in the same room or area in the facility. Containers are stored on pallets to prevent possible contact with leaked material.

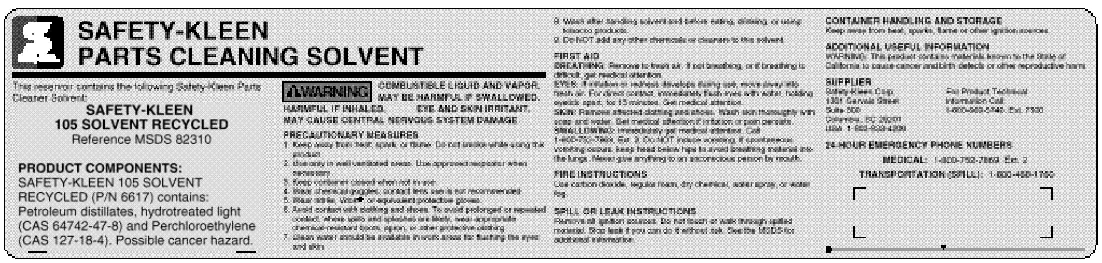
APPENDIX I

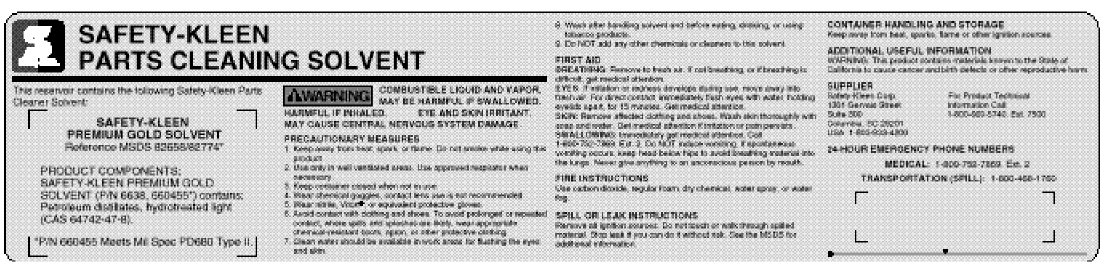
Product Labels











NOTICE

ONLY CONTAINERS WITH ONE OF THESE LABELS MAY BE EMPTIED INTO THE WET DUMPSTER

IF YOU ARE UNSURE, CONTACT YOUR SUPERVISOR

product data

carboline®

SEMSTONE® 140

PRODUCT DESCRIPTION

Semstone 140 is a 100% solids, high performance, epoxy lining system designed for concrete. Semstone 140 is a semi-leveling coating which may be applied as an aggregate filled and/or reinforced coating system. Semstone 140 is specially formulated to withstand some of industry's most aggressive chemicals.

USES, APPLICATIONS

- Process Slabs
- Tank Farm Floors
- Chemical Loading and Unloading Areas
- Spill Containment Areas

PRODUCT ADVANTAGES

Semstone 140 is a two-component system that possesses the following characteristics:

- Excellent resistance to chemical attack
- Excellent abrasion and impact resistance
- Exceptional thermal shock resistance
- Superior bonding qualities
- High cohesive strength
- Low permeability
- Low odor

CHEMICAL RESISTANCE

Semstone 140 is formulated to resist a variety of chemical solutions. Please consult Carboline Technical Service Department for specific recommendations.

PACKAGING

Semstone 140 is available in 1-gallon and 5-gallon units.

A 1 gallon unit consists of:
1 1 gallon can of Part A (resin)
1 1 quart can of Part B (hardener)

A 5 gallon unit consists of:
1 5 gallon pail of Part A (resin)
1 1 gallon can of Part B (hardener)

COVERAGE

Semstone 140 will cover 1,604 mils sq. ft./gal. For estimating purposes, one gallon of Semstone 140 will cover 64 sq. ft./5.96 sq. m at a thickness of 25 mils/0.63 mm. Application thickness may vary from 30-150 mils/0.75-3.8 mm, depending on expected service conditions (i.e., chemical exposure, temperature, traffic load and other mechanical abuse, immersion service vs. splash-spill, etc.). Consult Carboline's Technical Service Department for specific thickness recommendations. In addition, coverage rates will be effected by the condition of the surface being coated (degraded vs. smooth, steel vs. concrete, etc.).

STORAGE CONDITIONS

Store all components between 50-75°F/10-24°C in a dry area. Keep out of direct sunlight. Avoid excessive heat and do not freeze. The shelf life is one year in the original, unopened container

Twenty-four hours before application, all materials (components A and B, aggregate, etc.) should be stored at 70-85°F/21-29°C to facilitate handling.

PHYSICAL CHARACTERISTICS

Compressive Strength...................14,000 psi (ASTM C-579: AFC)

Tensile Strength..........................Neat: 6,300 psi
(ASTM D-638) Reinforced: 8,600 psi

Flexural Strength..........................Neat: 9,500 psi
(ASTM D-790) Reinforced: 15,800 psi
(ASTM C-580) Aggregate Filled: 6,100 psi

Flexural Modulus of Elasticity...........Neat: 4.7×10^5 psi
(ASTM D-790) Reinforced: 7.7×10^5 psi
(ASTM C-580) Aggregate Filled: 11.0×10^5 psi

Hardness.................................Neat: 75 (ASTM D-2240, Shore D)

Bond Strength..............................> 400 psi
(ASTM D-4541) (100% concrete failure)

Water Vapor Transmission..........0.0120 grams/hr./ft^2 (ASTM E-96)

Permeability...............................0.0042 perm. -in. (ASTM E-96)

Weight per Mixed Gallon...................10.0 lbs.

Pot Life @ 75°F.............................45 to 60 min*

Cure Times @ 75°F........................Dry to Touch: 12 hrs
Firm: 24 hrs
Chemical Service: 36 hrs

Flammability................................Non-flammable

* Significantly less at elevated temperatures

SUBSTRATE PREPARATION

General

Proper preparation is critical to ensure an adequate bond. The substrate must be dry and free of all wax, grease, oils, fats, soil, loose or foreign materials and laitance. Laitance and unbonded cement particles must be removed by mechanical methods, i.e., abrasive blasting or scarifying. Other contaminants may be removed by scrubbing with a heavy-duty industrial detergent and rinsing with clean water. For recommendations or additional information regarding substrate preparation, please contact Carboline's Technical Service Department.

Concrete

Concrete should be properly cured for 28 days and have the following characteristics:

- Substrate tensile strength of at least 300 psi.
- pH in the range of 7 to 11.

The surface must show open pores throughout and have a sandpaper texture.

Steel

Equipment base plates, etc. to be coated along with the concrete should be abrasive blasted to a near white metal finish, SSPC-10 or NACE-2, with a 1 to 2 mils anchor profile.

Masking

Mask surfaces that are not to be coated. This material is difficult to remove once applied.

SEMSTONE® 140

APPLICATION GUIDELINES

Before mixing and applying any material, make sure environmental conditions are satisfactory for application. For optimal working conditions, substrate temperature must be between 60°F/15°C and 80°F/27°C. Measure the surface temperature with a surface thermometer. Cold areas must be heated until the slab temperature is above 50°F/10°C. This will allow the material to achieve a proper cure. Also, a cold sub-strate will make the material stiff and difficult to apply. Warm areas or areas in direct sunlight must be shaded or arrangements made to work during evenings or at night. A warm substrate (60°F/15°C to 80°F/27°C) will aid in the material's workability; however, a hot substrate (80°F/27°C to 100°F/37°C) or a substrate directly in the sun will shorten the material's working time and can cause other phenomenon such as pinholing and bubbling. Substrate temperature should be greater than 5°F/3°C above dew point.

If the temperature is expected to drop below 50°F/10°C use Semstone 140CT.

APPLICATION

Priming

Apply Semstone 110 Primer in accordance with the product data sheet. Allow the primer to cure prior to the application of Semstone 140.

Note: For substrates with out-gassing concerns use Carboguard 1340. Primer should be applied while the substrate temperature is decreasing.

Broadcast Application (AFC – Broadcast)

Pre-mix Part A (resin) for 30 seconds using a Jiffy Mixer. Pour Part B (hardener) into the Part A pail and mix thoroughly for 2 minutes.

Apply a base coat at the specified thickness using a squeegee or a notched trowel. For a 60 mil/1.5 mm system apply a 25 mil/0.63 mm base coat and for a 125 mil/3.1 mm system apply a 50 mil/1.3 mm base coat. Immediately after applying the base coat, begin broadcasting the aggregate until a dry appearance is achieved.

Note: The use of a 20/40 mesh aggregate is highly recommended. One gallon of 20/40 mesh silica weighs 13-14 lbs.

After the base coat has cured, remove the loose aggregate. Apply a 10-15 mil/0.25-0.38 mm topcoat using a squeegee or roller.

Material Coverages

Below is a list of coverages for the Broadcast application depending upon desired thickness and texture.

MATERIAL	Nominal 60 mils/1.5 mm	Nominal 75 mils/1.9 mm	Nominal 125 mils/3.1 mm
Semstone 110 Primer	200-250 sq.ft./gal.	200-250 sq.ft./gal.	200-250 sq.ft./gal.
Semstone 140 Base Coat	64 sq.ft./gal.	45 sq.ft./gal.	32 sq.ft./gal.
Aggregate	1.5 lbs./sq.ft.	1.5 lbs./sq.ft.	2 lbs./sq.ft.
Semstone 140 Topcoat			
15 mils	100 sq.ft./gal.	100 sq.ft./gal.	100 sq.ft./gal.

Blended Application (AFC – Blended)

Pre-mix Part A (resin) for 30 seconds using a Jiffy Mixer. Pour Part B (hardener) into Part A and thoroughly mix for 2 minutes. After mixing Part A and Part B, split the mix into two 5 gallon buckets. While continuing to mix with a Jiffy Mixer, slowly add the aggregate.

Note: A 2:1 sand to liquid weight ratio will produce a trowel-like consistency. A 3:1 sand to liquid weight ratio will produce a grout-like consistency.

Note: The use of a 20/40 mesh silica aggregate is highly recommended. One gallon of 20/40 mesh silica weighs 13-14 lbs.

Apply the mixture at the desired thickness using a notched trowel.

Note: For vertical surfaces add Semstone Thixotrope Part C (pre-measured mixes) or Cab-O-Sil (TS 720) to the blended mix at a 1:2 Cab-O-Sil to liquid volume ratio.

After the surface has cured, the surface must be washed with soap and water prior to re-coating.

Note: Surface must be sanded prior to re-coating after an initial cure of 24 hours.

Material Coverages

Below is a list of coverages for the Blended application.

Reinforced (AFRC – Broadcast)

A fiberglass scrim cloth may be added to the 125 mil broadcast system. For the 125 mil broadcast system apply the fiberglass scrim cloth into the base coat prior to applying the aggregate.

Reinforced (AFRC – Blended)

A fiberglass scrim cloth may be added to the 125 blended system. For the 125 mil blended system apply a 25-35 mil/0.63-0.88 mm base coat and lay the fiberglass scrim cloth into the base coat.

Note: For a vertical surface, the base coat should be mixed with Cab-O-Sil (TS 720) at a 1:1 volume ratio.

Allow the base coat to become tacky and then apply Semstone 140 mortar at 90-100 mils/2.25-2.50 mm.

Note: Application of base coat, fiberglass scrim cloth, and mortar should be completed in the same day.

RECOMMENDATIONS

- Apply only on clean, sound, dry and properly prepared substrates.
- Minimum ambient and surface temperatures are 50°F/10°C at the time of application.
- Maximum surface temperatures should not exceed 90°F/32°C during the time of application.
- Substrate temperature should be greater than 5°F/3°C above dew point.
- Application and curing times are dependent upon ambient and surface conditions. Consult Carboline's Technical Service Department if conditions are not within the recommended guidelines.

PRECAUTIONS

- MEK, Toluene or Xylene solvents are recommended for clean up of Semstone 140 material spills. Use these materials only in strict accordance with manufacturer's recommended safety procedures. Dispose of waste materials in accordance with government regulations.
- The use of a NIOSH/MSHA approved respirator using a #TC-23C-738 organic vapor or a #TC-23C-740 organic vapor acid gas cartridge is mandatory.
- The selection of proper protective clothing and equipment will significantly reduce risk to injury. Body covering apparel, safety goggles and impermeable gloves are highly recommended.
- In case of contact, flush the area with water for 15 minutes and seek medical attention. Wash skin with soap and water.
- Use only with adequate ventilation.

NOTES

- Material Safety Data Sheets on Semstone 140 are available on request.
- Specific information regarding chemical resistance of Semstone 140 is available in the Semstone Chemical Resistance Guide.
- A staff of technical service engineers is available to assist with product application or to answer questions related to Carboline products.

carboline®

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An RPM Company

August 2003 replaces May 2003

SEMSTONE®

Chemical Resistance Guide

for Chemical Proofing of Concrete

carboline®

Protective Coatings and Linings

Chemical Resistance Guide

This guide is intended as an aid in determining the potential usefulness of the listed SEMSTONE® products as coatings to protect concrete and incidental steel from chemical exposure.

The chemical resistance of a coating is influenced by several factors including the primary chemical exposure (which could be a mixture of chemicals), severity of the exposure, contaminants, housekeeping practices, and operating temperatures. Testing is recommended to confirm stability.

Performance is also impacted by physical factors such as thermal cycling and thermal shock, the nature, design and condition of the substrate, traffic patterns and mechanical abuse. Users are urged to carefully evaluate each project according to its particular conditions and circumstances.

Some chemicals will stain or change the color of the coating. This does not necessarily mean chemical attack has occurred. This guide identifies many of the known staining chemicals, but this does not imply that others will not stain. If staining is a concern, the choice of coating color can be helpful in mitigating the problem.

Immersion test coupons are available to assist users in making a product selection. **Contact Sentry Polymers for additional assistance.**

SEMSTONE®	100/300	105/305	140	145	245	2010	870	805
ACETALDEHYDE	NR	NR	NR	2	T	1	2	T
ACETIC ACID, 10%	1	1	1	1	1	1	1	1
ACETIC ACID, 30%	2	2	2	2	1	1	1	2
ACETIC ACID, 50%	2	2	2	2	2	1	1	2
ACETIC ACID, GLACIAL	NR	2	2	2	2	1	1	2
ACETIC ANHYDRIDE	T	T	T	T	2	1	1	NR
ACETONE	2	1	1	1	1	1	2	2
ACETYL BROMIDE	NR	NR	NR	NR	T	T	1	NR
ACETYL CHLORIDE	T	2	T	2	1	1	1	NR
ACRYLIC ACID	2	2	NR	2	1	1	1	T
ACRYLONITRILE	NR	NR	NR	NR	1	1	NR	NR
ADIPIC ACID	2	1	2	1	1	1	1	2
ALLYL ALCOHOL	T	T	T	T	1	1	2	T
ALLYL CHLORIDE	T	T	T	T	1	1	1	T
ALUMINUM BROMIDE	1	1	1	1	1	1	1	1
ALUMINUM CHLORIDE	1	1	1	1	1	1	1	1
ALUMINUM FLUORIDE	1,A	1,A	1,A	1,A	1,A	1,A	1,A	1,A
ALUMINUM HYDROXIDE	1	1	1	1	1	1	1	1
ALUMINUM NITRATE	1	1	1	1	1	1	1	1
ALUMINUM POTASSIUM SULFATE	1	1	1	1	1	1	1	1
ALUMINUM SULFATE	1	1	1	1	1	1	1	1
AMMONIA	1	1	1	1	1	1	1	1
AMMONIUM BISULFITE	1	1	1	1	1	1	1	1
AMMONIUM CHLORIDE	1	1	1	1	1	1	1	1
AMMONIUM FLUORIDE	1,A	1,A	1,A	1,A	1,A	1,A	1,A	1,A
AMMONIUM HYDROXIDE	1	1	1	1	1	1	1	1
AMMONIUM LAURYL SULFATE, 30%	1	1	1	1	1	1	1	1
AMMONIUM NITRATE	1	1	1	1	1	1	1	1
AMMONIUM PERSULFATE	1	1	1	1	1	1	1	1
AMMONIUM SULFATE	1	1	1	1	1	1	1	1
AMMONIUM SULFIDE	1	1	1	1	1	1	1	1
AMMONIUM SULFITE	1	1	1	1	1	1	1	1
AMYL ACETATE	2	1	2	1	1	1	1	2
AMYL ALCOHOL	2	1	2	1	1	1	1	2
ANILINE	2	1	2	1	1	1	2	2
ANILINE HYDROCHLORIDE	1	1	1	1	1	1	1	2
ANTIMONY CHLORIDE (TRI)	1	1	1	1	1	1	1	1
AQUA REGIA	NR	NR	NR	NR	T	T	NR	NR
ARSENIC ACID	2	1	2	1	T	T	1	T
ARSENIOUS ACID	1	1	1	1	T	T	1	T
BARIUM CHLORIDE	1	1	1	1	1	1	1	1
BARIUM HYDROXIDE	1	1	1	1	1	1	1	1
BARIUM SULFATE	1	1	1	1	1	1	1	1
BARIUM SULFIDE	1	1	1	1	1	1	1	1
BEER	1	1	1	1	1	1	1	1
BENZAL CHLORIDE	2	1	2	1	1	1	2	2

SEMSTONE®	100/300	105/305	140	145	245	2010	870	805
BENZALDEHYDE	T	T	T	T	1	1	2	NR
BENZENE	1	1	1	1	1	1	1	2
BENZENE SULFONIC ACID	1	1	1	1	1	1	1	1
BENZOIC ACID	1	1	1	1	1	1	1	1
BENZOYL CHLORIDE	1	1	1	1	1	1	1	1
BENZYL ALCOHOL	1	1	1	1	1	1	1	1
BENZYL CHLORIDE	1	1	1	1	1	1	1	1
BLACK LIQUOR (PAPER)	1	1	1	1	1	1	1	1
BLEACH	1,C	1,C	1,C	1,C	1,C	1,C	1,C	1,C
BORIC ACID	1	1	1	1	1	1	1	1
BRINE	1	1	1	1	1	1	1	1
BROMINE GAS (DRY & WET)	NR	NR	NR	NR	T	T	2	NR
BROMINE, LIQUID	NR	NR	NR	NR	NR	NR	NR	NR
BROMINE WATER, 5%	2	2	2	2	T	T	1	T
BUTANOL	1	1	1	1	1	1	1	1
BUTYL ACETATE	1	1	1	1	1	1	1	1
BUTYL ACRYLATE	1	1	1	1	1	1	1	1
BUTYLAMINE	NR	2	NR	NR	T	T	2	NR
BUTYL CARBITOL	1	1	1	1	1	1	1	1
BUTYL CARBITOL ACETATE	1	1	1	1	1	1	1	1
BUTYL CELLOSOLVE ACETATE	1	1	1	1	1	1	1	1
BUTYL CELLOSOLVE SOLVENT	1	1	1	1	1	1	1	1
BUTYL ETHER	T	T	T	T	1	1	T	T
BUTYL LEVULINE ACID	1	1	1	1	1	1	2	2
N-BUTYRIC ACID	2	2	2	2	1	1	1	NR
CADMIUM CHLORIDE	1	1	1	1	1	1	1	1
CADMIUM PLATING CYANIDE	1	1	1	1	1	1	1	1
CALCIUM BISULFATE	1	1	1	1	1	1	1	1
CALCIUM CHLORIDE	1	1	1	1	1	1	1	1
CALCIUM HYDROXIDE	1	1	1	1	1	1	1	1
CALCIUM HYPOCHLORITE	1,C	1,C	1,C	1,C	1,C	1,C	1,C	1,C
CALCIUM NITRATE	1	1	1	1	1	1	1	1
CALCIUM SULFATE	1	1	1	1	1	1	1	1
CALCIUM SULFITE	1	1	1	1	1	1	1	1
CAPROLACTAM	2	1	2	1	1	1	1	2
CAPRYLIC ACID	1	1	1	1	1	1	1	2
CARBOLIC ACID	NR	NR	NR	NR	1	1	NR	NR
CARBON DIOXIDE GAS	1	1	1	1	1	1	1	1
CARBON DISULFIDE	2	2	2	2	1	1	NR	2
CARBON TETRACHLORIDE	1	1	1	1	1	1	1	2
CASTOR OIL	1	1	1	1	1	1	1	1
CELLOSOLVE	1	1	1	1	1	1	1	1
CELLOSOLVE ACETATE	1	1	1	1	1	1	1	1
CHLORINE DIOXIDE	1	1	1	1	1	1	1	1
CHLORINE GAS (DRY & WET)	2	2	2	2	2	2	1	2
CHLORINE WATER SATURATED	1	1	1	1	1	1	1	1

SEMSTONE®	100/300	105/305	140	145	245	2010	870	805
CHLOROACETIC ACID	2	2	2	2	1	1	1	2
CHLOROBENZENE (MONO)	2	1	2	1	1	1	1	2
CHLOROBUTANE	1	1	1	1	1	1	1	1
CHLOROFORM	NR	2	NR	2	1,B	1,B	NR	NR
CHLOROPHENOL	NR	2	NR	2	1	1	NR	NR
CHLOROPYRIDINE (TETRA)	2	2	2	2	1	1	2	NR
CHLOROSULFONIC ACID	NR	NR	NR	NR	T	T	NR	NR
CHLOROTOLUENE	1	1	1	1	1	1	2	2
CHROMIC ACID, 10%	1	1	1	1	1	1	1	1
CHROMIC ACID, 50%	2	2	2	2	1	1	2	2
CHROMIC CHLORIDE	1	1	1	1	1	1	1	1
CITRIC ACID	1	1	1	1	1	1	1	1
COPPER CHLORIDE	1	1	1	1	1	1	1	1
COPPER CYANIDE	1	1	1	1	1	1	1	1
COPPER NITRATE	1	1	1	1	1	1	1	1
COPPER SULFATE	1	1	1	1	1	1	1	1
CORN OIL	1	1	1	1	1	1	1	1
COTTONSEED OIL	1	1	1	1	1	1	1	1
CRESOL	2	2	2	2	1	1	2	NR
CRESYLIC ACID	2	2	2	2	1	1	2	NR
CRUDE OIL, SOUR	1	1	1	1	1	1	1	1
CRUDE OIL, SWEET	1	1	1	1	1	1	1	1
CUMENE	1	1	1	1	1	1	1	1
CUPRIC AMMONIUM CHLORIDE	1	1	1	1	1	1	1	1
CYCLOHEXANE	1	1	1	1	1	1	1	1
CYCLOHEXANOL	1	1	1	1	1	1	1	1
CYCLOHEXANONE	1	1	1	1	1	1	1	1
CYMENE	1	1	1	1	1	1	1	1
DEXTROSE	1	1	1	1	1	1	1	1
DIBUTYL PHTHALATE	1	1	1	1	1	1	1	1
DICHLOROACETIC ACID	2	1	2	1	1	1	1	2
DICHLOROBENZENE	2	1	2	1	1	1	1	2
DIESEL FUEL	1	1	1	1	1	1	1	1
DIETHYLAMINE	T	T	T	T	1	1	T	T
DIETHYLBENZENE	1	1	1	1	1	1	1	1
DIETHYL KETONE	1	1	1	1	1	1	2	2
DIMETHYLAMINOPROPYLAMINE	2	2	2	2	1	1	2	2
DIMETHYL ANILINE	1	1	1	1	1	1	1	T
DIMETHYLFORMAMIDE	2	2	2	2	1	1	NR	NR
DINITROBENZENE	T	T	T	T	1	1	T	T
DINITRO BUTYLPHENOL	T	T	T	T	1	1	T	T
DINITROTOLUENE	T	T	T	T	1	1	T	T
DIVINYLBENZENE	2	1	2	1	1	1	1	NR
DODECYL ALCOHOL (LAURYL)	1	1	1	1	1	1	1	1
EPICHLOROHYDRIN	NR	2	NR	2	1	1	NR	NR
ETHOXYETHANOL	1	1	1	1	1	1	1	1
ETHOXYLATED NONYL PHENOL	1	1	1	1	1	1	1	2
ETHYL ACETATE	1	1	1	1	1	1	1	1
ETHYL ACRYLATE	1	1	1	1	1	1	1	1
ETHYL ALCOHOL	1	1	1	1	1	1	1	1
ETHYLAMINE	T	T	T	T	1	1	NR	T
ETHYLBENZENE	1	1	1	1	1	1	1	2
ETHYL BROMIDE	NR	NR	NR	NR	1	1	NR	NR
ETHYL CHLORIDE	NR	2	NR	2	1,B	1,B	2	NR
ETHYL CHLOROFORMATE	T	T	T	T	T	1	T	NR
ETHYLENE DICHLORIDE (EDC)	2	2	2	2	1,B	1,B	2	NR
ETHYLENE GLYCOL	1	1	1	1	1	1	1	1
ETHYLENE OXIDE	T	T	T	T	2	1	NR	NR
ETHYL ETHER	NR	NR	NR	NR	T	2	2	NR
ETHYLHEXYL ACRYLATE	T	T	T	T	1	T	2	NR

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ETHYL SULFATE	1	1	1	1	1	1	1	1
FATTY ACIDS	1	1	1	1	1	1	1	1
FERRIC CHLORIDE	1,D	1,D	1,D	1,D	1,D	1,D	1,D	1,D
FERRIC NITRATE	1	1	1	1	1	1	1	1
FERRIC SULFATE	1	1	1	1	1	1	1	1
FERROUS CHLORIDE	1	1	1	1	1	1	1	1
FLUOBORIC ACID	1,A	1,A	1,A	1,A	1,A	1,A	1,A	1,A
FLUOSILICIC ACID, 10%	1,A	1,A	1,A	1,A	1,A	1,A	1,A	1,A
FORMALDEHYDE	1	1	1	1	1	1	1	2
FORMIC ACID	NR	2	NR	2	1	1	1	NR
FUEL OIL	1	1	1	1	1	1	1	1
FURFURAL	NR	T	NR	T	1	1	NR	NR
FURFURYL ALCOHOL	1	1	1	1	1	1	2	T
GASOLINE	1	1	1	1	1	1	1	1
GLUCOSE	1	1	1	1	1	1	1	1
GLYCERINE	1	1	1	1	1	1	1	1
GLYCOLIC ACID	2	1	2	1	1	1	1	2
GOLD PLATING (CYANIDE)	1	1	1	1	1	1	1	1
GRAPE JUICE	1	1	1	1	1	1	1	1
GREEN LIQUOR	1	1	1	1	1	1	1	1
HEPTANE	1	1	1	1	1	1	1	1
HEXANE	1	1	1	1	1	1	1	1
HYDRAZINE, 35%	2	2	2	2	1	1	NR	NR
HYDRAZINE HYDRATE	2	2	2	2	1	1	NR	NR
HYDRIODIC ACID, 20%	2	2	2	2	1	1	1	T
HYDROBROMIC ACID, 20%	2	1	2	1	1	1	1	2
HYDROBROMIC ACID, 48%	2	1	2	1	1	1	1	2
HYDROCHLORIC ACID, 10%	1	1	1	1	1	1	1	1
HYDROCHLORIC ACID, 20%	1	1	1	1	1	1	1	1
HYDROCHLORIC ACID, 37%	1,D	1,D	1,D	1,D	1,D	1,D	1,D	1,D
HYDROFLUORIC ACID, 10%	1,A	1,A	1,A	1,A	1,A	1,A	1,A	1,A
HYDROFLUORIC ACID, 20%	1,A	1,A	1,A	1,A	1,A	1,A	1,A	1,A
HYDROFLUORIC ACID, 48%	2,A	1,A	2,A	1,A	1,A	1,A	1,A	2,A
HYDROFLUOSILICIC ACID, 10%	1,A	1,A	1,A	1,A	1,A	1,A	1,A	1,A
HYDROFLUOSILICIC ACID, 25%	1,A	1,A	1,A	1,A	T	T	1,A	1,A
HYDROGEN PEROXIDE	1	1	1	1	1	1	1	1
HYDROGEN SULFIDE GAS	1	1	1	1	1	1	1	1
HYPOCHLOROUS ACID	2	2	2	2	2	2	2	2
IODINE, CRYSTALS	2	2	2	2	1	1	1	2
ISOPHORONE	1	1	1	1	1	1	1	1
ISOPROPYL ACETATE	1	1	1	1	1	1	1	1
ISOPROPYL ALCOHOL	1	1	1	1	1	1	1	1
ISOPROPYL ETHER	1	1	1	1	1	1	1	1
JET FUEL	1	1	1	1	1	1	1	1
KEROSENE	1	1	1	1	1	1	1	1
KETCHUP	1	1	1	1	1	1	1	1
LACTIC ACID	1	1	1	1	1	1	1	1
LARD	1	1	1	1	1	1	1	1
LAURIC ACID	1	1	1	1	1	1	1	1
LAURYL CHLORIDE	1	1	1	1	1	1	1	1
LEAD ACETATE	1	1	1	1	1	1	1	1
LECITHIN	1	1	1	1	1	1	1	1
LEVULINIC ACID	1	1	1	1	1	1	1	1
LINSEED OIL	1	1	1	1	1	1	1	1
LITHIUM BROMIDE	1	1	1	1	1	1	1	1

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LITHIUM CHLORIDE	1	1	1	1	1	1	1	1
LITHIUM HYDROXIDE	1	1	1	1	1	1	1	1
LITHIUM HYPOCHLORITE	1,C	1,C	1,C	1,C	1,C	1,C	1,C	1,C
MAGNESIUM BISULFITE	1	1	1	1	1	1	1	1
MAGNESIUM CARBONATE	1	1	1	1	1	1	1	1
MAGNESIUM CHLORIDE	1	1	1	1	1	1	1	1
MAGNESIUM HYDROXIDE	1	1	1	1	1	1	1	1
MAGNESIUM SULFATE	1	1	1	1	1	1	1	1
MALEIC ACID	2	2	2	2	1	1	1	2
MALIC ACID	1	1	1	1	1	1	1	1
MERCURIC CHLORIDE	1	1	1	1	1	1	1	1
MERCUROUS CHLORIDE	1	1	1	1	1	1	1	1
MERCURY	1	1	1	1	1	1	1	1
METHANOL	1	1	1	1	1	1	1	2
METHYL ACETATE	2	1	2	1	1	1	2	2
METHYL ALCOHOL	1	1	1	1	1	1	1	2
METHYLAMYL ALCOHOL	1	1	1	1	1	1	1	1
METHYL CHLORIDE	NR	2	NR	2	1	1	NR	NR
METHYLENE CHLORIDE	NR	2	NR	2	1,B	1,B	NR	NR
METHYL ETHYL KETONE	1	1	1	1	1	1	1	2
METHYL ISOBUTYL KETONE	1	1	1	1	1	1	1	2
METHYL METHACRYLATE	1	1	1	1	1	1	2	2
METHYL OLEATE	1	1	1	1	1	1	1	2
MILK	1	1	1	1	1	1	1	1
MINERAL SPIRITS	1	1	1	1	1	1	1	1
MOLASSES	1	1	1	1	1	1	1	1
MONOCHLOROACETIC ACID	2	1	2	1	1	1	1	2
MONOETHANOLAMINE	2	1	2	1	1	1	2	2
MURIATIC ACID	1	1	1	1	1	1	1	1
NAPHTHA	1	1	1	1	1	1	1	1
NAPHTHALENE	1	1	1	1	1	1	1	1
NAPHTHENIC ACID	1	1	1	1	1	1	1	1
NICKEL PLATING, BRIGHT	1	1	1	1	T	T	1	1
NITRIC ACID, 5%	1,D	1,D	1,D	1,D	1,D	1,D	1,D	1,D
NITRIC ACID, 10%	2,D	2,D	2,D	2,D	2,D	1,D	1,D	2,D
NITRIC ACID, 30%	NR	NR	NR	NR	2,D	2,D	1,D	NR
NITRIC ACID, 50%	NR	NR	NR	NR	NR	2,D	1,D	NR
NITROBENZENE	1	1	1	1	1	1	1	2
OCTANOIC ACID	1	1	1	1	1	1	1	2
N-OCTYL ALCOHOL	1	1	1	1	1	1	1	1
OILS, ANIMAL	1	1	1	1	1	1	1	1
OILS, MINERAL	1	1	1	1	1	1	1	1

SEMSTONE®	100/300	105/305	140	145	245	2010	870	805
OILS, VEGETABLE	1	1	1	1	1	1	1	1
OLEIC ACID	NR	2	NR	2	1	1	1	NR
OLEUM	NR	NR	NR	NR	2,D	2,D	NR	NR
OXALIC ACID	1	1	2	1	1	1	1	2
PENTACHLOROETHANE	NR	2	NR	2	1	1	2	NR
PERCHLORIC ACID	2	2	2	2	1	1	1	NR
PERCHLOROETHYLENE	1	1	1	1	1	1	1	2
PHENOL, 5%	1	1	1	1	1	1	1	1
PHENOL, 85%	NR	NR	NR	NR	1	1	NR	NR
PHOSPHORIC ACID, 20%	1	1	1	1	1	1	1	1
PHOSPHORIC ACID, 50%	1	1	1	1	1	1	1	1
PHOSPHORIC ACID, 85%	1	1	1	1	2	1	1	1
PHOSPHORIC ACID, 100%	NR	2	NR	2	2	1	1	NR
PHOSPHOROUS ACID	2	2	NR	2	1	1	1	NR
PHOSPHOROUS OXYCHLORIDE	2	1	2	1	1	1	2	NR
PHOSPHOROUS TRICHLORIDE	2	2	2	2	2	T	NR	NR
PHTHALIC ACID	1	1	1	1	1	1	1	1
PICRIC ACID, 10% IN ALCOHOL	2	2	2	2	T	T	1	NR
POLYACRYLIC ACID	2	2	2	2	1	1	1	2
POTASSIUM ACETATE	1	1	1	1	1	1	1	1
POTASSIUM BROMIDE	1	1	1	1	1	1	1	1
POTASSIUM CARBONATE, 10%	1	1	1	1	1	1	1	1
POTASSIUM CARBONATE, 25%	1	1	1	1	1	1	1	1
POTASSIUM CHLORATE	1	1	1	1	1	1	1	1
POTASSIUM CHLORIDE	1	1	1	1	1	1	1	1
POTASSIUM CYANIDE	1	1	1	1	1	1	1	1
POTASSIUM DICHROMATE	1	1	1	1	1	1	1	1
POTASSIUM FLUORIDE	1,A	1,A	1,A	1,A	1,A	1,A	1,A	1,A
POTASSIUM HYDROXIDE, 10%	1	1	1	1	1	1	1	1
POTASSIUM HYDROXIDE, 25%	1	1	1	1	1	1	1	1
POTASSIUM HYDROXIDE, 50%	1	1	1	1	1	1	1	1
POTASSIUM NITRATE	1	1	1	1	1	1	1	1
POTASSIUM PERMANGANATE	2	2	2	2	1	1	1	2
POTASSIUM PERSULFATE	1	1	1	1	1	1	1	1
POTASSIUM SULFATE	1	1	1	1	1	1	1	1
PROPANEDIOL	1	1	1	1	1	1	1	1
PROPIONIC ACID, 50%	2	2	2	2	1	1	1	NR
PROPIONIC ACID, 100%	NR	NR	NR	NR	2	1	1	NR
PROPYLENE GLYCOL	1	1	1	1	1	1	1	1
PYRIDINE	NR	NR	NR	NR	2	1	NR	NR
SALICYLIC ACID	1	1	1	1	1	1	1	1
SALT BRINE	1	1	1	1	1	1	1	1
SILVER NITRATE	1,D	1,D	1,D	1,D	1,D	1,D	1,D	1,D

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SKYDROLL	1	1	1	1	1	1	1	1
SODIUM ACETATE	1	1	1	1	1	1	1	1
SODIUM BICARBONATE	1	1	1	1	1	1	1	1
SODIUM BISULFATE	1	1	1	1	1	1	1	1
SODIUM BISULFITE	1	1	1	1	1	1	1	1
SODIUM BROMATE	1	1	1	1	1	1	1	1
SODIUM CARBONATE	1	1	1	1	1	1	1	1
SODIUM CHLORATE	1	1	1	1	1	1	1	1
SODIUM CHLORIDE	1	1	1	1	1	1	1	1
SODIUM CHLORITE	1	1	1	1	1	1	1	2
SODIUM CHROMATE	1	1	1	1	1	1	1	1
SODIUM CYANIDE	1	1	1	1	1	1	1	1
SODIUM DICHROMATE	1	1	1	1	1	1	1	1
SODIUM FLUORIDE	1,A	1,A	1,A	1,A	1,A	1,A	1,A	1,A
SODIUM HYDROSULFIDE	1	1	1	1	1	1	1	1
SODIUM HYDROXIDE, 10%	1	1	1	1	1	1	1	1
SODIUM HYDROXIDE, 50%	1	1	1	1	1	1	1	1
SODIUM HYPOCHLORITE, 5%	1,C	1,C	1,C	1,C	1,C	1,C	1,C	1,C
SODIUM HYPOCHLORITE, 18%	1,C	1,C	1,C	1,C	1,C	1,C	1,C	1,C
SODIUM LAURYL SULFATE, 20%	1	1	1	1	1	1	1	1
SODIUM OXALATE	1	1	1	1	1	1	1	1
SODIUM PEROXIDE	1,C	1,C	1,C	1,C	1,C	1,C	1,C	1,C
SODIUM PHOSPHATE (ACID)	1	1	1	1	1	1	1	1
SODIUM PHOSPHATE (TRI)	1	1	1	1	1	1	1	1
SODIUM SULFATE	1	1	1	1	1	1	1	1
SODIUM SULFIDE	1	1	1	1	1	1	1	1
SODIUM SULFITE	1	1	1	1	1	1	1	1
SODIUM TARTRATE	1	1	1	1	1	1	1	1
SODIUM THIOSULFATE	1	1	1	1	1	1	1	1
SOYBEAN OIL	1	1	1	1	1	1	1	1
STANNIC CHLORIDE	1	1	1	1	1	1	1	1
STANNOUS CHLORIDE	1	1	1	1	1	1	1	1
STERIC ACID	1	1	1	1	1	1	1	1
STYRENE	1	1	1	1	1	1	1	2
SUGAR/SUCROSE	1	1	1	1	1	1	1	1
SULFAMIC ACID	2	2	2	2	1	1	1	2
SULFITE LIQUOR (PAPER)	1	1	1	1	1	1	1	1
SULFUR DIOXIDE	1	1	1	1	1	1	1	1
SULFURIC ACID, 10%	1	1	1	1	1	1	1	1
SULFURIC ACID, 25%	1	1	1	1	1	1	1	1
SULFURIC ACID, 50%	1	1	1	1	1	1	1	1
SULFURIC ACID, 75%	1	1	1	1	1	1	1	2

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SULFURIC ACID, 98%	NR	1,D	NR	1,D	1,D	1,D	NR	NR
SULFURIC ACID, OLEUM	NR	NR	NR	NR	2,D	2,D	NR	NR
SULFURIC ACID (SAT'D)	1	1	1	1	1	1	1	1
SULFUR TRIOXIDE	1	1	1	1	1	1	1	1
TALL OIL	1	1	1	1	1	1	1	1
TANNIC ACID	1	1	1	1	1	1	1	1
TARTARIC ACID	1	1	1	1	1	1	1	1
TETRACHLOROETHANE	1	1	1	1	1	1	1	2
TETRACHLOROETHYLENE	1	1	1	1	1	1	1	2
TETRAHYDROFURAN	NR	NR	NR	NR	2	1	NR	NR
TETRAHYDROFURFURYL ALCOHOL	2	2	2	2	1	1	2	NR
TITANIUM TETRACHLORIDE	1	1	1	1	1	1	1	1
TOLUENE	1	1	1	1	1	1	1	2
TOLUENE SULFONIC ACID	1	1	1	1	1	1	1	1
TOLUIDINE	NR	T	NR	T	1	1	1	NR
TRICHLORACETIC ACID	2	1	2	1	1	1	1	2
TRICHLOROBENZENE	1	1	1	1	1	1	1	2
TRICHLOROETHANE	1	1	1	1	1	1	1	2
TRICHLOROETHYLENE	2	1	2	1	1,B	1,B	NR	NR
TRICRESYL PHOSPHATE	1	1	1	1	1	1	1	1
TRIETHYLAMINE	1	1	1	1	1	1	1	T
TRIETHYLENETETRAMINE	1	1	1	1	1	1	2	2
TRIETHYL PHOSPHITE	1	1	1	1	1	1	1	1
TRISODIUM PHOSPHATE	1	1	1	1	1	1	1	1
TURPENTINE	1	1	1	1	1	1	1	1
UREA	1	1	1	1	1	1	1	1
VINEGAR	1	1	1	1	1	1	1	1
VINYL CHLORIDE	NR	2	NR	2	1	1	NR	NR
WATER, DEIONIZED	1	1	1	1	1	1	1	1
WATER, DEMINERALIZED	1	1	1	1	1	1	1	1
WATER DISTILLED	1	1	1	1	1	1	1	1
WHITE LIQUOR (PAPER)	1	1	1	1	1	1	1	1
WINE	1	1	1	1	1	1	1	1
XYLENE	1	1	1	1	1	1	1	1
ZINC CHLORIDE	1	1	1	1	1	1	1	1
ZINC SULFATE	1	1	1	1	1	1	1	1

Key:

1 = Suitable for constant flow, and/or areas with frequent spills and/or poor drainage.
2 = Suitable for intermittent spills when good housekeeping practices are followed. Maintenance may be expected if spills are not cleaned up.
T = Insufficient data available to provide rating. Testing is recommended. Consult Carboline Technical Service.
NR = Not Recommended. May be suitable for limited exposure applications under certain conditions. Consult Carboline Technical Service.
A = This chemical will attack silica aggregate. Silica must be totally encapsulated. Consult Carboline Technical Service for non-silica aggregate recommendations.
B = For constant immersion service, coating must be postcured 12 hours at 150°F. Consult Carboline Technical Service for alternate cure schedules.
C = This chemical is unstable under some conditions, resulting in aggressive behavior. Consult Carboline Technical Service.
D = Coating may show some staining or color change when exposed to this chemical.

NOTE: Ratings are based on 135°F maximum exposure temperature. In many cases service temperature can be as high as 200°F, but consult Carboline for recommendations beyond the 135°F limit.

APPENDIX II

Coating Specifications

Drawings

SAFETY-KLEEN SYSTEMS, INC.
SYRACUSE SERVICE CENTER
EPA ID No. NYD 982743312

ATTACHMENT IX

MANAGEMENT OF WASTE IN TANK PLAN

ATTACHMENT IX

MANAGEMENT OF WASTE IN TANK PLAN

ABSTRACT

Purpose: Spent parts washer solvents are stored at the Syracuse facility in a 20,000-gallon, aboveground storage tank. Spent solvents generated from off-site locations are transported to the facility in containers. At the Service Center, these containers are emptied into a bulk solvent storage tank through use of devices designed for commingling and bulking. Handling of the spent solvents follows specific practices. This plan details these practices and provides data relative to the hazardous waste management unit that is used for storage.

Every fifth year from the effective date of the permit, the shell thickness of the tank is measured consistent with a procedure or practices developed by a nationally recognized association or independent testing laboratory. If thinning of one millimeter per year or greater occurs on the tank wall as compared to the design thickness, Safety-Kleen will obtain and submit to the Department an integrity assessment of the tank certified by an independent professional engineer licensed in New York state attesting the tank system has sufficient structural integrity for storing hazardous waste and the tank is structurally sound and will not result in a release before the next inspection. This assessment will be used by the Department to determine the acceptability of the tank for continued storage of hazardous waste.

ATTACHMENT IX - MANAGEMENT OF WASTE IN TANK PLAN

1.0 MANAGEMENT PRACTICE

The Syracuse Service Center manages spent parts washer solvents through use of a 20,000-gallon, aboveground storage tank. Table IX - 1 provides some data on the tank. Additional information is provided in the text and in Appendix IX - A.

TABLE IX - 1

Tank Specifications

Safety-Kleen Systems, Inc.
Syracuse, New York

Waste Description	Permitted Waste Codes	Tank Capacity in Gallons	Minimum Design Shell Thickness
Safety-Kleen Parts Washer Solvents (Hydrocarbon- and Aqueous- Based)	D001, D004-D011, D018, D019, D021-D030, D032-D043, Non-Hazardous	20,000	1/4"/5/16” (Carbon Steel)

6 NYCRR 373-1.5(c)(1) The written assessment by an independent, qualified, professional engineer registered in the State of New York is attached as Appendix IX - A.

6 NYCRR 373-1.5(c)(2) The 20,000-gallon, aboveground, horizontal tank is approximately 41'0" long and roughly 8'0" wide. It is constructed of carbon steel and is painted white to reflect sunlight and inhibit corrosion. The tank wall is approximately 1/4" thick and the heads are about 5/16" thick.

6 NYCRR 373-1.5(c)(3) An emergency waste feed cut-off valve, located adjacent to the wet dumpsters at the return and fill station will prevent the waste tank from being over-filled. In addition, the 20,000-gallon, aboveground horizontal tank is equipped with a high level alarm which indicates when the tank is 95% full. The high level alarm is inspected daily for proper functioning of electrical and mechanical components. The tank assessment report and engineering drawings presented in Attachment XI, provide additional information about the tank and the high level alarm.

The tank is equipped with a 3" diameter conservation (breathing) vent and an emergency vent that opens at a pressure of 0.5 psi. The tank is further equipped with a dedicated, secondary containment system. The tank system also has a dry chemical-based fire suppression system. No additional secondary containment capacity is needed to account for the fire suppression media. The specific gravity of the hydrocarbon-based parts washer solvents is approximately 0.8 and the vapor pressure is less than 2mm at 68^{o} F.

6 NYCRR 373-1.5(c)(4) The process flow diagrams are attached in Appendix IX - A. Other design drawings and diagrams are contained in Attachment XI.

The tank is not subject to conditions that would result in severe external corrosion. Rain shields preclude the entry of storm water or snow into the secondary containment system. No severe atmospheric conditions are anticipated that would result in external corrosion.

6 NYCRR 373-2.10(c)(1) The tank installation assessment has been performed by an independent, professional engineer registered in New York. The assessment is included in Appendix IX - A.

6 NYCRR 373-2.10(c)(1)(I) The tank is constructed in accordance with Underwriters Laboratories Standard 142 and is located more than 50' from the property line. The secondary containment for the tank consists of an external liner made of approximately 1/4" steel plates, as described in the tank installation assessment and engineering drawings.

The tank and its secondary containment are inspected each operating day. Any leaks or signs of deterioration are noted and remediated promptly. If a leak cannot be promptly repaired, the tank contents may be transferred to another tank or tanker truck(s) and the tank will not be used again until its integrity is assured. If the tank cannot be repaired, it will be destroyed and replaced. The procedures to remove spilled or leaked material from the secondary containment system are described in the Contingency Plan. Spilled or leaked wastes are removed promptly upon detection.

The secondary containment structure is inspected each operating day for cracks, corrosion and other signs of deterioration. Any signs of deterioration are noted and repaired promptly. Additionally, in accordance with NYSDEC Technical Administrative Guidance Memorandum 91-07 (previously 3019), the secondary containment system is inspected annually by an independent engineer.

The tank secondary containment system is designed to collect liquids originating from the tank. The accumulated liquids are managed as described in this section and in the Contingency Plan.

The emergency waste feed cut-off valves, located adjacent to the wet dumpsters, prevent the waste tank from being overfilled. The high level alarm indicates when the tank is 95% full. The procedures described below will further ensure the safe loading and unloading of the tank:

(1) Park the tanker truck inside tanker containment area and secure it for spent solvent transfer. Set brakes, engage governor and hook up grounding equipment.

2) Check available tank volumes via gauges to verify that there is enough volume to transfer each load safely and prevent overfills. Leave hatches open on the tanker truck.

(3) Make hose connections between storage tank and tanker truck in proper sequence (i.e. to empty vessel first). Double check to ensure connections are tight and locked.

(4) Engage pump and move clean product to storage tank. Check for leaks along hose, piping and at connections. If a leak is noted, stop the operation immediately and make repairs or make arrangements for repairs.

(5) Check the available tanker truck volume. Reverse hose connections and move spent solvent from storage to tanker truck. (Again, check for leaks and repair as needed).

(6) Drain hoses before disconnecting to prevent spillage.

(7) In the event of a spill, follow the emergency procedures outlined in the Contingency Plan.

(8) Check paperwork; document proper quantities of material delivered and picked up Ensure manifests, bills of lading and other related paperwork are in order.

In the event of a spill or leak, the procedures described in the Contingency Plan are followed. An incidental spill is handled as described in Section 4.5.1 and a major spill as described in Section 4.5.2. Any solvent or sorbent used in the cleanup will be containerized and will be handled as a hazardous waste unless analysis proves otherwise. Equipment used will be decontaminated as necessary and the rinse water will be managed as a hazardous waste unless analysis proves otherwise.
6 NYCRR 373-2.10(l) The ignitable waste is stored in such a way that it is protected from any material or conditions that may cause the waste to ignite. No hot work (i.e. welding) is done in the vicinity of the tank. A portion of the waste solvent tank and related piping is insulated and heat traced in order to prevent freezing and/or rupturing. The tank is also painted white to reflect sunlight.

Through use of a volume gauge, tank capacity is monitored to ensure sufficient capacity is maintained.

1.1 Spent Solvent Management Operations

Spent parts washer solvents are transported to the facility in containers. The containers remain on the transport vehicles until they can be removed and processed in the return and fill station. On Mondays, Tuesdays, Wednesdays and Thursdays, the containers are removed from the vehicles and the waste transferred to the tank within 16 hours of arrival at the facility. Vehicles arriving after work hours on Fridays or holidays are off-loaded before 12 noon of the next working day. Vehicles holding containers of spent parts washer solvent positioned at the facility are equipped with secondary containment systems designed to capture material released into the storage compartment of the vehicles.

Waste transported to the facility on Safety-Kleen vehicles is managed in accordance with applicable USDOT regulations. Hazardous materials are loaded and segregated in accordance with the Segregation Table For Hazardous Materials in 49 CFR 177.848.

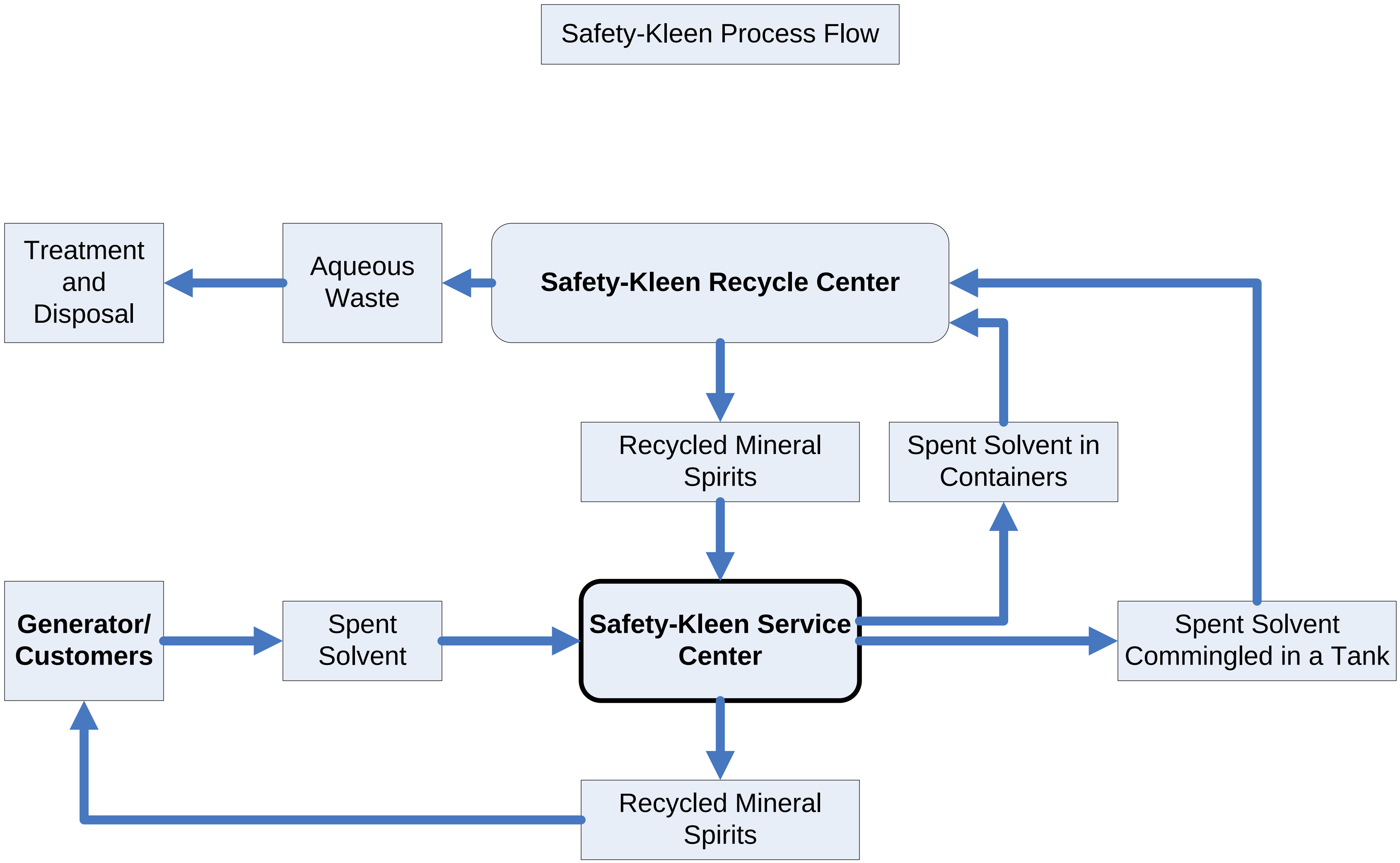
Spent parts washer solvents from customers are transferred to the waste storage tank via the return and fill station which consists of two, dumpster/barrel washers and pumps. Each container is manually emptied allowing the waste to flow into one of the dumpsters. After the waste is transferred into a dumpster, the container is placed on a barrel washer and sprayed with the spent solvent for washing. The washed container is kept on a stand, upside down for draining. The waste material in the dumpsters/barrel washer is pumped to the tank.

A container rinsing unit is installed immediately adjacent to one of the dumpsters/barrel washers. The rinsing unit provides a final rinse for some containers that are being reused to ship clean solvent to customers. The containers for which this unit is utilized will be rinsed with clean solvent and drained upside down on a funnel-like device. The container rinsing unit is piped directly to the barrel washer that drains to the dumpster in order to minimize emissions and to minimize the chance of spills.

APPENDIX IX – A

Process Flow Diagram

Tank Integrity Assessment


Safety-Kleen Process Flow
Treatment and Disposal
Aqueous Waste
Safety-Kleen Recycle Center
Recycled Mineral Spirits
Spent Solvent in Containers
Generator/ Customers
Spent Solvent
Safety-Kleen Service Center
Spent Solvent Commingled in a Tank
Recycled Mineral Spirits

Safety-Kleen Corp.

POST CONSTRUCTION ASSESSMENT OF HAZARDOUS WASTE STORAGE TANK SYSTEM SAFETY-KLEEN BRANCH LOCATED AT DEWITT, NY

Prepared for:

Safety-Kleen Corp.
Elgin, Illinois

Prepared by:

N.D.Eryou, Ph.D, P.E.
Consulting Engineer
8 Ivy Place
Huntington, NY 11743

NOVEMBER 1993

TANK SYSTEM CERTIFICATION
(6 NYCRR 373-2 (c) (i))

I hereby certify that I have reviewed this Hazardous Waste Tank Installation Assessment Report and being familiar with New York State Department of Environmental Conservation 6 NYCRR 373-2.10 do attest that the assessment has been conducted in accordance with good engineering practices.

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 those persons directly responsible for gathering the information, the information 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 fines and imprisonment for knowing violations.

STATE OF NEW YORK DENNIS N. ERYOU

12-5-95

N. Dennis Eryou, Ph.D., P.E.
New York Professional Engineer
License Number 060292-1

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TABLE OF CONTENTS

1.0 INTRODUCTION

This report documents the assessment of a hazardous waste storage tank system at the Safety-Kleen facility in DeWitt, NY. This assessment was written to address the requirements of New York State Department of Environmental Conservation (NYSDEC) Regulations (6 NYCRR 373-2.10 (c)). The assessment is based upon a site inspection on November 3, 1993.

2.0 SYSTEM DESCRIPTION

Used solvents will be received from offsite generators in drums and unloaded into a dumpster inside the facility and pumped through aboveground piping into an aboveground steel storage tank of 20,000 gallon capacity. Accumulated used solvents will be periodically pumped from this tank to a tanker truck for offsite disposal. Sludge and solids that accumulate in the tank will be removed through a manway for offsite disposal.

The 20,000 gallon Areo-Power storage tank is a horizontal cylinder 34' long and 10'-0" in diameter. The tank shell is 1/4" thick and the heads are 5/16" thick. The tank itself sits on four steel saddles in a rectangular steel dike, 41'0" long by 12'-0" wide, by 6'-0" high. "Rainshields" cover the gap between the cylindrical tank and the rectangular dike to prevent the entrance of stormwater into the dike. The tank has a double shell and heads above the "rainshields" which prevent stormwater from entering the containment dike. The outer shell is 7 ga. steel and the outer heads are 1/4" thick. All joints are welded steel and the entire tank assembly is UL142 tested. Appendix A contains drawings of the tank and integral containment dike.

This storage tank is vented to the atmosphere by a 3" diameter service vent and an 8" diameter emergency vent which opens at a pressure of 0.5 psi. Tank liquid level is monitored by a Varec level gauge located on the front of the tank dike and a Milltronics ultrasonic overfill alarm connected into an adjacent alarm panel with an audible/visible annunciator. Details on the level indicator and overfill alarm system are provided in Appendix B.

For the purpose of this assessment, the hazardous waste storage system has been defined to include the storage tank, the aboveground piping for truck loading and dumpster unloading, plus the secondary containment system for these components. An adjacent fresh solvent tank and piping system is not included as its contents are not classified as hazardous waste.

3.0 STORAGE SYSTEM

3.1 Secondary Containment (6 NYC 373-2.10 (d) (2))

The secondary containment is considered to be a liner (external to the tank).

(a) Materials Compatibility

The waste material collected and stored by the system is hazardous waste consisting of petroleum products and various contaminants. The containment dike is made of steel which is compatible with petroleum based products and generally used to store this type of product.

(b) Strength

The steel containment dike is formed of 3/16" thick welded steel plates, reinforced with angles. The Areo-Power tank and dike are UL142 listed. The tank and dike are subjected to a full scale hydrostatic test to confirm their ability to withstand the forces which would occur if the dike were filled with water.

(c) Foundation

The tank and dike assembly sit on an 8" thick reinforced concrete slab. The Preconstruction Assessment Report, dated June 1993, provides calculations indicating that the reinforced concrete slab is capable of supporting the tank and dike, including 20,000 gallons of waste mineral spirits.

(d) Leak Detection

All components of the tank and piping system are above ground and capable of being accessed for visual inspection. Leaks in the primary tank can be detected by inspection of the containment dike for retained liquids.

(e) Liquid Removal

The tank containment dike is sloped to drain to a sump in the rear corner of the containment dike. A 3/4" diameter pipe runs from the sump to the vertical front of the dike wall where a pump can be connected for removal of spilled or leaked waste by manual methods.

(f) Containment Volume

Calculations provided in the Preconstruction Assessment, dated June 1993, indicated that the tank containment dike has a design volume sufficient to hold 100% of the 20,000 gallon tank. Calculated containment volume is 22,000 gallons; since the rainshields preclude the entry of stormwater into the dike, this volume is more than adequate.

(g) Containment Impermeability

The 3/16" thick welded steel plate from which the containment dike is fabricated is inherently impermeable. Seams are double welded and the design was proven leaktight by a hydrostatic test. Interior and exterior surfaces of the dike are coated with a corrosion resistant primer, and the exterior surface is coated with an exterior grade enamel to prevent corrosion.

(h) Ancillary Equipment

Ancillary equipment for this system is located aboveground and is accessible for visual inspection and detection of leakage. The dumpster and associated piping are underlain by an impervious concrete dike system designed to contain spills. All piping not over a concrete containment area uses butt welded joints; the tanker truck connection points are contained in an above grade spill containment box.

3.2 Design Standards (6 NYC 373-2.10 (b) (2) (i))

All Areo-Power primary tanks are constructed in accordance with Underwriter's Laboratories Standard 142. The UL142 standard is intended to prevent the collapse or rupture of tanks non-corrosive stable liquids with a specific gravity not greater than one, and an operating pressure of 0.5 psig or less. The ancillary equipment includes a dumpster and steel pipe which runs between the tanks and the dumpster, plus piping from the tank to the tanker truck connection point. All the piping is above ground,and piping connections outside secondary containment are welded, and the piping is insulated and heat traced. The tanker truck connection points are contained in an above ground spill containment box.

3.3 Hazardous Characteristics of the Waste (6 NYC 373-2.10 (b) (2) (ii))

The three hazardous characteristics of the used mineral spirits waste, as defined by 40 CFR 261, are:

(a) Ignitability (D001): A waste is considered ignitable and, therefore, hazardous, if its flash point is below 140°.

The used mineral spirits to be stored in this tank have a typical flash point in the range of 100°F to 110°, and therefore is ignitable (D001).

(b) EP toxicity due to cadmium content (D006): A waste is considered to be EP toxic due to cadmium content if its concentration exceeds 1.0 ppm (parts per million).

A typical value for cadmium concentration is 0.93 ppm. Since this value is close to 1.0 ppm, it may be considered to be EP toxic due to cadmium content.

(c) EP toxicity due to lead content (D008): A waste is considered to be EP toxic due to lead content if concentration exceeds 5.0 ppm.

A typical value for lead concentration is 5.0 ppm. Therefore, the used mineral spirits is considered to be EP toxic due to lead content.

Of these three hazardous waste characteristics, none would affect the compatibility of the mineral spirits waste with the carbon steel tank material. The ignitability quality of its own would not affect the tank material. Also, the presence of cadmium and lead, in concentrations as listed in B and C above, would not have an adverse affect on the tank material. Mineral spirits is often used as a light hydrocarbon coating to prevent rusting of metal parts, and therefore acts to preserve the carbon steel.

The National Fire Protection Agency identifies three types of fire hazards by degree. These ratings for the spent mineral spirits are below.

(a) Health Hazards - 0. Includes "materials which on exposure under fire conditions would offer no hazard beyond that of normal combustible material".

(b) Flammability Hazards - 2. Includes "materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur... (and) should include liquids having a flash point above 100°F, but not exceeding 200°F." It can be pointed out that, although the flash point falls in this category, the vapor pressure (which reflects the amount of ignitable gases given off by the liquid) of mineral spirits is very low (2 mm). Ignitability is therefore not nearly as great as that of other liquids with similar flash points.

(c) Reactivity (instability) Hazards - O. Includes "materials which in themselves are normally stable, even under fire exposure conditions, and which are not reactive with water."

Finally, the Material Safety Data Sheet for fresh mineral spirits, which has mostly the same characteristics as spent mineral spirits, describes the material as stable and combustible, and incompatible only with strong oxidizing agents. Warnings include avoiding heat, sparks and flame. Oxidizers are not handled at the service center, and operating procedures are such that they minimize the possibility of ignition sources near the tank farm. It can be concluded, therefore, that the tank is compatible with the hazardous waste being stored.

3.4 Corrosion Protection (6 NYC 373-2.10 (b) (2) (iii))

The tank exterior is painted white (alkyd base enamel over primer coat) to reflect sunlight and to inhibit corrosion. The tank will be periodically repainted as required.

3.5 Documented Age of Tank System (6 NYC 373-2.10 (b) (2) (iv))

The tank, Areo-Power #584, was fabricated in January 1993 and was installed in September 1993.

3.6 Ancillary Equipment

Ancillary equipment items located off of the tank concrete pad are protected from damage by concrete filled steel bumper posts. All ancillary equipment items are supported to prevent excessive stress due to settlement, vibration, expansion or contraction. The ancillary equipment design and support is in compliance with ANSI B31.3 requirements.

3.7 Tank Integrity Examination (NYC 373-2.10 (b) (2) (v) (b))

On November 3, 1993 a tank integrity examination was conducted to ascertain that the installation of the storage and piping system components was performed substantially in accordance with the design documentation. No evidence of significant defects, damage, or evidence of improper construction or installation of the system primary containment components was noted during the inspection.

3.8 Tank Tightness Test (NYC 373-2.10 (b) (2) (v) (b))

The waste solvent tank system components (tank and piping) were pressure tested and in accordance with the Safety-Kleen System Test Standard (copy attached in Appendix B3). A test report, certified by a New York State registered professional engineer is provided in Appendix B4.

3.9 Piping

All system valves, threaded connections, and other non-exempt equipment items, joints and connections are provided with secondary containment by the concrete slabs. All waste mineral spirits piping outside the concrete slabs has butt welded connections, and is insulated and heat traced. Appendix B4 contains a piping pressure test report, certified by a New York State registered professional engineer.

3.10 Fire Suppression

The 20,000 gallon hazardous waste tank was inspected and found to be in conformance with the drawings in Appendix A.

4.0 CONCLUSIONS

Based upon the information presented above and included in the Appendices to this report, the hazardous waste tank and piping system installed at the Safety-Kleen facility in DeWitt, New York, has been installed in accordance with the approved drawings. The materials of construction are sufficiently compatible with the wastes being stored to not leak wastes being stored to not leak, collapse, rupture or fail if and operated as per the referenced construction drawings and 6 NYC 373.2-2.10(b) (2) (i). Secondary containment measures have been provided that meet the requirements of 6 NYC 373-2.10 (d). The relevant tank, piping and system component drawings are included with this report.

SAFETY-KLEEN SYSTEMS, INC.
SYRACUSE, NY SERVICE CENTER

ATTACHMENT X

AIR EMISSIONS STANDARDS

ATTACHMENT X

AIR EMISSIONS STANDARDS

ABSTRACT

Purpose: To ensure compliance with relevant sections of NYDEC Hazardous Waste Regulations, the Syracuse Facility will design and implement a program directed towards inspecting and monitoring the on-site regulated unit for air emission releases. The purpose of this plan is to describe how the facility will undertake these efforts.

ATTACHMENT X - AIR EMISSIONS STANDARDS

1.0 AIR EMISSION STANDARDS FOR EQUIPMENT LEAKS

The permitted hazardous waste management units at the Syracuse facility and its associated equipment are subject to the requirements of 6NYCRR Part 373-2.28, Air Emission Standards for Equipment Leaks.

The hazardous waste stream associated with the hazardous waste storage tank and associated equipment is spent, Safety-Kleen parts washer solvents. The vapor pressure of Safety-Kleen hydrocarbon-based product solvent is less than 0.27 kPa (2 mm Hg) at 20 degrees C. Therefore this solvent is classified as a heavy liquid. Vapor pressure data for of Safety-Kleen's parts washer solutions are provided in the attached Table. The spent, hydrocarbon-based solvents will impart a lower vapor pressure because of contamination with oils, greases, etc. from use.

Each piece of equipment subject to the Part 373-2.28 requirements is marked with proper identification in order to distinguish it from non-affected equipment. Drawing AGPB200A shows the piping schematic and marking for the waste tank system.

One open-ended unloading line is associated with the affected waste management unit. A check valve, gate valve, and cam lock seal the open end except during operations requiring hazardous waste stream flow through the open-ended valve. This equipment arrangement complies with the requirements of 373-2.28 (g).

Pumps, valves, flanges and pressure relief devices in heavy liquid service are subject to inspection and repair requirements specified at 373-2.28 (i). Compliance with this standard is achieved by daily visual inspection of affected equipment. Inspection of each piece of tagged equipment also includes the flanges connecting the equipment to the pipeline. Because the spent, hydrocarbon-based parts washer solvent has a maximum concentration of approximately 2,700 PPM in the vapor phase, a portable organic vapor analyzer will not be used for leak detection because leaks cannot result in concentrations of more than 10,000 PPM. The saturation concentration of parts washer solvent in the air will be much below 10,000 PPM as shown in the attachment. Suspect equipment leaks are therefore monitored based on visual observation. This is recorded as a part of the facility inspection record.

If a leak is detected, the piece of equipment will be tagged and identified with the equipment identification number and date of actual leak detection. The first attempt at repairing the leaking equipment will be made within 5 calendar days of leak detection (373-2.28 (i)(1)(3)(ii)) and consist of those practices outlined in 373-2.28(h)(5). Leaks will be repaired within 15 calendar days of detection, delay of repairs will be allowed only in those cases listed in 373-2.28(j).

Equipment lists and records of equipment monitoring and repair are maintained within the facility operating record. The operating record includes the following information specified in 373-2.28(o)(2)(i):

(i). Equipment identification number and hazardous waste management unit identification:

The hazardous waste management system consists of a 20,000-gallon aboveground, horizontal storage tank and ancillary equipment in the form of two drum washer/dumpsters and associated piping.

(ii). Approximate locations within the facility:

A site map identifying the waste management unit is provided and a piping schematic showing equipment location is provided with the drawings.

(iii). Type of equipment:

- The types of equipment subject to regulation are pumps, valves, flanges, open-ended lines and pressure relief devices in heavy liquid service.

(iv). Percent by weight total organic in the hazardous waste stream at the equipment:

- The hazardous waste streams handled by the subject equipment are spent hydrocarbon- and aqueous- based parts washer solvents. The hydrocarbon-based stream is comprised of 100 percent by weight organic material. The aqueous-based material is not defined as an organic material.

(v). Hazardous waste state at the equipment:

- The physical state of the hazardous waste stream is liquid.

(vi). Method of compliance with the standard:

- The subject equipment maintained in heavy liquid service is subject to leak detection and monitoring requirements provided in 373-2.28(i). Compliance with this standard is achieved through daily inspection of affected equipment and appropriate leak response procedures described above. The open-ended line has been installed to meet the proper equipment standards specified at 373-2.28(g).

2.0 STANDARDS FOR CONTAINERS AND TANKS

The Safety-Kleen Syracuse facility controls air pollutant emissions from waste management units at this facility pursuant to the requirements of 373-2.29, through implementation of this compliance plan. This plan describes the waste determination procedures, tank and container design and management practices, organic emissions controls, inspections and monitoring, and record keeping standards.

2.1 Waste Determination Procedures

For purposes of waste determination, this facility utilizes knowledge developed in the Waste Analysis Plan found in Attachment I. Based upon this knowledge, it has been determined that all organic wastes managed in the tank or in containers display an average volatile organic concentration of greater than 500 ppmw at the point of waste origination. Therefore, all hazardous wastes managed in tanks or containers shall be managed in accordance with the standards in 373-2.29.

2.2 Point of Waste Origination

The point of waste origination for all wastes generated offsite and transported to the site in closed containers, which are subsequently managed in tanks or containers, is effectively the site boundary at the entrance gate. For those wastes generated onsite, the point of waste origination is the point of waste generation, as defined in RCRA.

2.3 Tanks

The tank in which organic wastes are managed is described in detail in Attachment IX. Certain features of this tank as they relate to 373-2.29 standards are described here.

The tank is a fixed roof, non-pressurized, quiescent unit. The tank is managed under Level 1 controls. The tank design capacity is 20,000 gallons and the wastes managed in the tank exhibits vapor pressures of less than 5.2 kPa (11.1 psi). The actual vapor pressure of the waste managed in the tank is approximately 0.2 psia. The maximum organic vapor pressure is determined using knowledge of the waste pursuant to 373-2.29 (e)(3)(i).

The tank is designed so that all cover openings can be closed with no visible gaps, holes, cracks, or other open spaces into the interior of the tank. The cover and all cover openings operate with no detectable emissions when in a closed position. Cover openings are maintained in a closed position at all times except when waste is being added or removed from the tank, or when necessary sampling, repair, or maintenance is performed on the tank. A visual inspection of closure devices will be performed annually.

The tank is equipped with a conservation vent that has been designed to operate with no detectable organic emissions when in the closed position. In addition, the tank is equipped with a long bolt manway pressure relief device that remains in the closed position when not in use to relieve pressure.

2.4 Containers

The containers in which hazardous wastes are managed are described in Attachment VIII.
Containers in use at the facility are less than 0.46 m^3 in size. Waste is not treated by stabilization. Therefore, air pollutant emissions from containers between 0.1 m^3 and 0.46 m^3 in size shall be controlled in accordance with Container Level 1 standards.

Containers received at the facility shall be equipped with covers and closure devices so that there are no visible holes, gaps, or other open spaces into the container when the closure devices are in place and secured. While in storage, closure devices on containers of hazardous waste shall be in place and secure.

When Safety-Kleen accepts possession of containers and the containers are not emptied immediately, a visual inspection of the containers will be performed within 24 hours of receipt. The container, cover, and closure devices shall be inspected for visible cracks, holes, gaps, or other open spaces. If a defect is noted the containers are either emptied into the Return and Fill unit; or they are repackaged, or the container is repaired within one day of discovery. All container repairs are completed within 5 days or the waste is removed from the container. Inspections of stored containers are documented on the facility inspection report forms found in Attachment II.

3.0 RETURN & FILL STATION/DRUM WASHER:

3.1 Introduction

One of Safety-Kleen's primary business lines is the collection of used parts washer solvent from small, medium and large customers and the redistribution of the reclaimed solvent back to the customer. The linchpin of this collection and redistribution process is the company's network of branch facilities and recycles centers. Each branch operates a fleet of vehicles manned by trained service representatives who are responsible for the collection of used solvent from the customer, servicing of the parts washers equipment, and replenishment of the equipment with clean solvent. The typical size of the containers is 16 gallons or 30 gallons. Depending upon the size of the customer, a service representative will remove one or more containers of dirty solvent, each container about 2/3rd full of waste solvent. Upon return to the branch facility, the service representative unloads the drums from the transport vehicle onto the branch dock area or other permitted container storage area. The drums are then emptied into a unit designated as a "Return and Fill Station" (RFS). Drawing AG06-704A provides a detailed drawing of the floor plan of the RFS area. When sufficient quantities of solvent have been processed through the RFS and collected in the permitted storage tank, a tanker is arranged and the spent solvent is pumped to a tanker parked within a secondary containment and transported to one of Safety-Kleen's recycle centers for reclamation.

3.2 Operation

Spent parts washer solvents that are returned to the branch are packaged in containers that can range in size typically from 16 to 30 gallons. In many of Safety-Kleen's parts washers, the containers were used as the solvent reservoir located below the parts washer unit while it was in use at the customer's location. Once at the branch, the transport vehicle backs up to the unloading dock area that includes the elevated return and fill/drum washer (RFS) area, vicinity grating and secondary containment. Containers are unloaded onto the RFS (see drawings in Attachment XI). Under normal operating conditions, containers are emptied either as they are unloaded from the route trucks or box trailers or after the entire shipment has been unloaded into a permitted container storage area. Emptying of a container requires the operator to open the lid of the RFS unit and individually pour each drum of used parts washer solvent into the unit. The RFS units are equipped with a drum washer that is used to remove any solids that may have accumulated on the interior of the container. The RFS Unit holds the waste dumped and the residues from the washing process. The drum washer uses the solvent removed from the container to clean the interior of the container by low pressure spraying. The exterior of the container is cleaned by revolving brushes on which the emptied drum is placed.

After a container has been emptied and washed, it is allowed to drip dry on a rack located within the RFS. Once the container is sufficiently dry, it is staged in the vicinity to be refilled with clean recycled parts washer solvent. If the container is to be refilled with Safety-Kleen's Premium 150 solvent, it is also rinsed with a small quantity of clean Premium 150 parts washer solvent before it is refilled with clean solvent. The Premium 150 solvent rinsing is conducted using special equipment located within the RFS unit containment system. During container processing, the solvent level in the RFS is closely monitored and once solvent accumulates to a certain level, it is pumped automatically (via float switch activation) to the used solvent tank. It can also be manually operated when required.

As previously mentioned, the facility typically empties the containers of used parts washer solvent as soon as the shipment arrives at the facility or as described in Section 1.1 of Attachment IX. The normal emptying, washing and filling operation usually require from 2 ½ to 4 hours. Following the emptying of all containers of used parts washer solvent in a shipment, the operator will pump any solvent remaining in the RFS unit to the lowest possible level (about 2 inches) and close the RFS lid until the next shipment arrives. This practice is repeated until all daily shipments are received. At the end of the operating day, the RFS is pumped to the lowest possible level and cleaned to be ready for the next day's use. All solids collected from the reservoir of the RFS are containerized and treated as a newly generated hazardous waste. Used parts washer solvent stored in the RCRA permitted tank is regularly transported to a Safety-Kleen Recycle Center where it is recycled into clean product for redistribution. Containerized solids collected from the RFS daily cleaning process are also shipped off site to a Safety-Kleen Recycle Center.

3.3 Air Emission Controls for the Return & Fill Station/Drum Washers:

SK has provided a mechanical ventilation system (fans) in a location near the drum filling areas. The ventilation system for dispensing areas will be equipped with an air flow switch or other equally reliable method that is interlocked to sound an audible alarm upon failure of the ventilation system. The volume of the room is 97,999 CF. The ventilation fans will provide a ventilation rate of at least 6 air exchanges per hour.

In addition, for employee safety, the personnel are required to wear personnel protective equipment as specified in the Hazard Assessments developed for the Return and Fill operations. Such PPE may include chemical resistant gloves, eye protection, and chemical resistant aprons. Required documentation of OSHA mandated programs are maintained in the facility files (e.g. Hazard Communication Program, Hazard Assessments, Personal Protective Equipment Program, Lock Out/Tag Out Program, etc.). Safety-Kleen maintains a written safety and health program for its employees involved in the hazardous waste operations according to OSHA 29 CFR 1910.120(b)(1)(i). As required in OSHA 29 CFR 1910.120(i) Safety-Kleen has implemented an informational program as part of the safety and health program to inform employees engaged in the RFS operation of the nature, level and likely degree of exposure.

To minimize potential VOC emissions during the washing of drums, Safety-Kleen will keep the lid of the Return and Fill unit closed at all times while washing of drums and when the unit is not in use and at all other times except when the spent solvent is added. Safety-Kleen follows the requirements for Level 1 tanks under RCRA Subpart CC, which requires closure devices (the RFS lids) to remain in a closed position, with no cracks or gaps, except to provide access to add or remove waste, while performing inspection, or maintenance and removal of accumulated sludge. Safety-Kleen believes Level 1 type controls are appropriate in the current situation, given the size of the return and fill units and the low vapor pressure of the solvent transferred through them. Please refer to the attached drawings in Attachment XI. In addition, Safety-Kleen has installed a switch on the units so that the drum washer cannot be operated unless the lids are in a closed position and the ventilation fans are operating.

While not in operation, the RFS Unit sump will contain no more than two (2) inches of hazardous waste, the minimum volume necessary to prime the pump. This unit will be deemed not in service during periods of time between each shift, between each processing batch, or at any time the unit is left unattended for 15 minutes or longer. When not in operation, the RFS Unit cover will be maintained in the closed position and the junctions of the lid will be tightly fitted to ensure that no organic vapor leaks resulting in emissions above 500 ppmv occur.

In addition, Safety-Kleen will conduct leak testing around the lid of the RFS unit according to the procedure outlined in 6 NYCRR 373-3.29(e)(4), quarterly for a period of 1 year, after which the frequency of testing will be evaluated based on the monitoring results. The local ambient concentration around the source must be determined on the day of the test, before commencing the rinsing or RFS operations or any operation that could elevate the local ambient concentration. Alternatively, the local ambient concentration will be determined outside the RFS building away from any emission source.

The leak test will be conducted midway through the RFS operation when the drums are washed [example: if a batch of 20 drums are washed, the test should be performed when the 10th drum is washed]. A monitoring log containing the following information will be maintained at the facility:

1. Time and date of the test.
2. Background reading, time and where it was taken.
3. Monitoring results.
4. Calibration information.
5. The name of the person who conducted the test.
6. Defects and repairs completed if the reading is over 500 ppmv.

If the difference between the maximum organic concentration and background level exceeds or is equal to 500 ppmv, all repairs necessary to bring the difference below 500 ppmv must be done. Safety-Kleen will make the first efforts at repair of the defect no later than 5 calendar days after detection and complete the repair as soon as possible but no later than 45 calendar days after detection.

INSPECTION AND MONITORING REQUIREMENTS:

Safety-Kleen will inspect and monitor air emission control equipment in accordance with 373-2.29(i)(1).

Safety-Kleen has developed and implemented a written plan and schedule to perform the inspections and monitoring in accordance with 373-2.29(i)(2). The plan is included in the Appendix X-1 of this attachment.

Table I

	Mean	Std. Deviation	# Samples	%RSD
SK Premium Gold Solvent				
Vapor Pressure @ 68 _F, torr*	0.15	0.052	19	34
Flashpoint, _F	150	2.9	19	1.9
SK 105 Solvent Recycled				
Vapor Pressure @ 68 _F, torr*	0.39	0.25	13	63
Flashpoint, _F	134	10	13	7.7
SK 105 Solvent Virgin				
Vapor Pressure @ 68 _F, torr*	0.81	0.21	6	26
Flashpoint, _F	106	1.0	6	1.0

* torr = mm Hg, 0 _C; = 0.133 kPa

EQUILIBRIUM (SATURATION) CONCENTRATIONS OF VOCs IN AIR AT ATMOSPHERIC PRESSURE (760 mm Hg) AND AMBIENT TEMP (68 F)

SK Parts Washer Solvent

Atm . Pressure (mm Hg)	760
Weight of Air (pounds)	1
Ambient Temp (F)	68
VOC Vapor Pressure (mm Hg)	0.81
Molecular Weight of VOC	150
(1) Partial Pressure air	759.19
(2) Mole Fraction of air	0.998934211
(3) Pound-moles of air	0.034482759
(4) Pound-moles, total	0.034519549
(5) Pound-moles of VOC	3.67906E-05
(6) Pounds of VOC	0.005518586
(7) VOC Concentration (PPM vol)	1065.789474
(8) VOC Concentration (PPMwght)	5488.29818

The Saturation Concentration is calculated using Dalton's Law, I.e., the sum of the partial pressures equals the total pressure and overall gas phase material balance wherein the sum of vapor (and air) mole fractions equals 1.

APPENDIX X-1

Annual Visual Tank Inspection

Subpart CC Visual Inspection Checklist

In Accordance with 6NYCRR 373-2.29 (i)

Annual Visual Tank Inspection

Complete this inspection by July of each year to satisfy the annual inspection requirements under Subpart CC.

The inspector shall check for defects in the waste solvent tank that could result in air pollutant emissions.

- Visible cracks, holes, or gaps in roof sections or between the roof and the tank wall.

__ No __ Yes

- Cracked or damaged seals or gaskets on closure devices.

__ No __ Yes

- Broken or missing hatches, access covers, caps, or other closure devices.

__ No __ Yes

- Other defects.

__ No __ Yes

Action taken to correct unacceptable conditions:

____

____

____

____

Inspector Name: ______________________ Signature: ____________________________

Date of Inspection: ____________________ Facility No.:___________________________

COMPLETE FOR WASTE SOLVENT TANK

APPENDIX X-2

Subpart BB Repair Record

REPAIR RECORD FOR EQUIPMENT IN HEAVY LIQUID SERVICE

In Compliance With 40 CFR 264.1064 and/or 6NYCRR 373-2.28

Date of Potential Leak____

Equipment Identification Number____

Date Leak Was Detected____

Date(s) of Each Attempt to Repair the Leak____

Date of Delay for Repair and Reason for Delay
(required if repairs are delayed by more than 15 days)____

Method of
Repair____

Date of
Repair____

Signature of
Inspector/Repairer____

This form must be completed for each time a leak is discovered in any piece of equipment in hazardous waste liquid service.

Additional Requirements

If a leak is detected, the following additional steps must be taken:

1. Attach a waterproof and readily visible tag to the piece of leaking equipment. This tag must be marked with the equipment ID number.
2. Make an attempt to repair the equipment within 5 days of detection.
3. If the leaking equipment is a valve, the tag must be left in place for 2 months after repair. The tag may be removed from other types of equipment immediately after repair.

EAST MOLLOY ROAD

(HOSMAN ROAD CR No 71)

EAST MOLLOY ROAD

NOTE: UTILITIES SHOWN TAKEN FROM EXISTING RECORDS
SIDE YARD: TOTAL SIDE YARD WIDTH NOT LESS THAN 32 FEET, NEITHER OF WHICH MAY BE LESS THAN 12 FEET.

TOTAL AREA = 4.774± ACRES

All that tract or parcel of land situate in the Town of Dewitt, County of Onondaga and State of New York, being part of Military Lot No. 9 in said Town, being part of lands conveyed by United States of America to Hancock Associates, Limited Partnership by deed dated September 12, 1984 and recorded in Onondaga County Clerk's Office September 18, 1984 in Book 3120 of Deeds at page 60, and being more particularly described as follows:

Beginning at the intersection of the easterly boundary of V.I.P. Parkway as shown on a map of Cushing Paul Reserve Center - Townline, Section "A" Amended made by Alfred N. Ianuzi, Jr., L. S. and filed in Onondaga County Clerk's Office June 23, 1987 as Map No. 6617, with the northerly boundary of lands conveyed by Hancock Associates Limited Partnership to Cushing Paul Industrial Partners I by deed dated August 6, 1986 and recorded in Onondaga County Clerk's Office in Book 3282 of Deeds at page 252, said point also being 425.80 feet distant northerly, measured along said easterly boundary of V.I.P. Parkway from its intersection with the northerly boundary of East Molloy Road; running thence N 03° 19' 48" E along said easterly boundary of V.I.P. Parkway and its northerly prolongation, a distance of 300.00 feet to a point; thence S 87° 01' 46" E, through said lands conveyed to Hancock Associates Limited Partnership, a distance of 317.49 feet to a point in an easterly boundary of said lands conveyed to Hancock Associates Limited Partnership; thence along the boundaries of said Hancock Associates Limited Partnership, the following courses and distances:

1) S 03° 19' 48" W, 34.91 feet; 2) S 86° 40' 12" E, 419.25 feet; 3) S 03° 05' 59" W, 183.69 feet; 4) S 86° 59' 46" E, 25.00 feet; 5) S 03° 05' 59" W, 78.75 feet to the northeasterly corner of the aforementioned lands conveyed to Cushing Paul Industrial Partners I; thence N 87 ° 01' 46" W along said northerly boundary of lands conveyed to Cushing Paul Industrial Partners I, a distance of 762.80 feet to the point of beginning, containing 4.774 acres of land, more or less.

Subject to easements and restrictions of record.

TO:

THE UNDERSIGNED HEREBY CERTIFIES THAT THIS IS A CORRECT MAP MADE FROM AN ACTUAL SURVEY.

N.Y.S. LICENSED LAND SURVEYOR

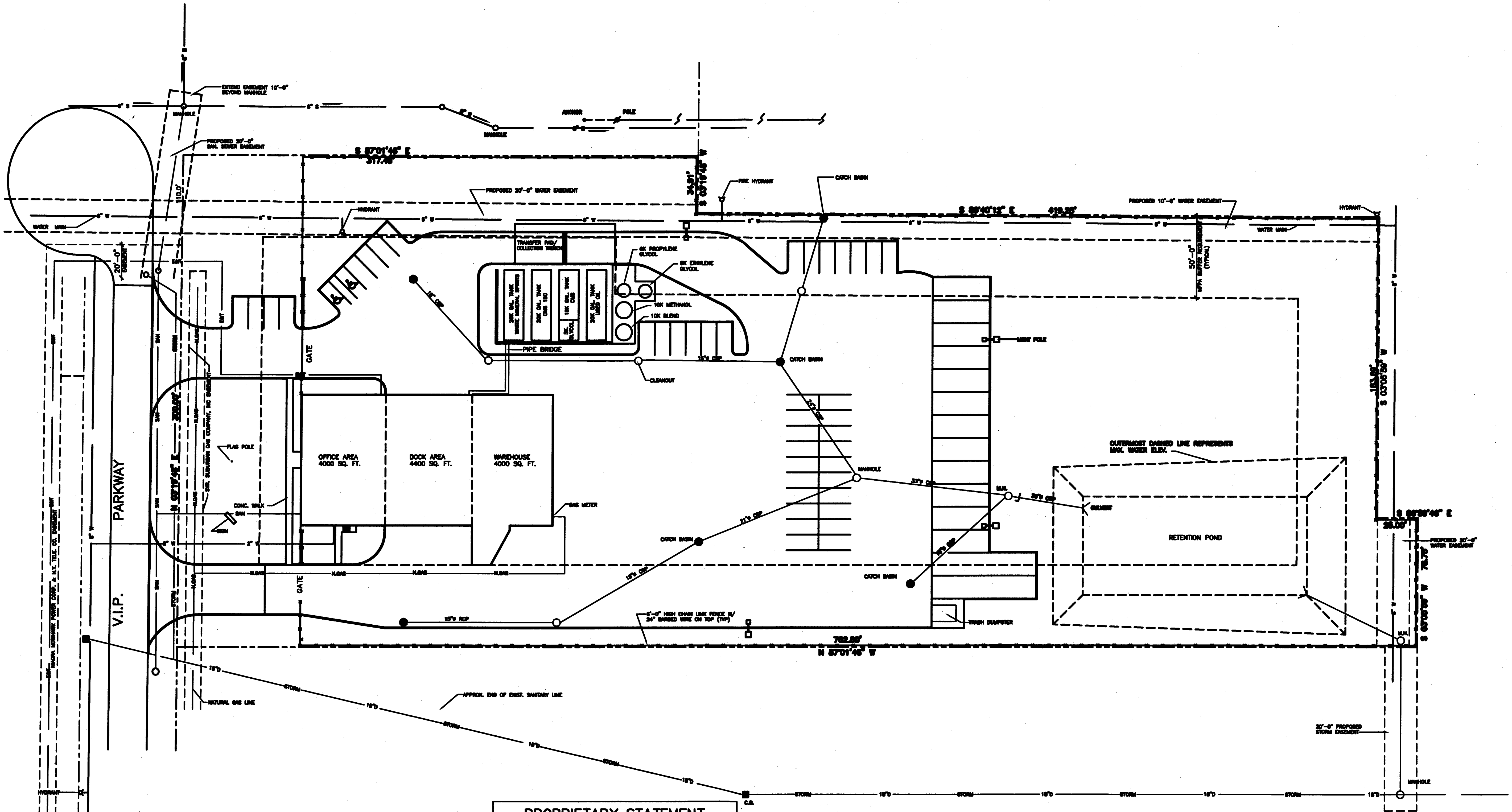
REVISIONS
11-17-89
2-6-90
2-9-93
6-11-93
4-26-94
11-17-94
4-29-08

PART OF MILITARY LOT No 9
TOWN OF DEWITT
ONONDAGA COUNTY, NEW YORK

STATE OF NEW YORK · HAL R. ROMANS · LICENSED LAND SURVEYOR

IANUZI & ROMANS LAND SURVEYING, P.C.
LIVERPOOL & SYRACUSE, NEW YORK
(315) 457-7200

DATE: JANUARY 11, 1989
SCALE: 1" = 30'
FILE NO. 1748.001
SHEET NO.
F.B. No



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 DUPLICATED, USED, DIVULGED, REPRODUCED, COPIED, DISCLOSED OR APPROPRIATED IN WHOLE OR IN PART FOR ANY PURPOSE OTHER THAT AS EXPRESSLY AUTHORIZED BY SAFETY-KLEEN SYSTEMS, INC. THIS DRAWING MUST BE RETURNED PROMPTLY UPON REQUEST.

Project Solutions Companies

1390 Boone Industrial Drive • Suite 200 • Columbia • MO 65202 • Phone: (573) 443-7100 • Fax: (573) 443-7181 •

STATE OF NEW YORK
DENNIS N. ERYOU
060292
LICENSED PROFESSIONAL ENGINEER
4-30-10

GENERAL NOTES

1. NON-PERMITTED AREAS MAY CHANGE.

NO.	DESCRIPTION	BY	CHK	APPR	DATE
C	REVISE TANK LAYOUT	JEK	MH	MH	042810
B	ADD W.W.F. TANKFARM	JEK	MH	MH	080708
A	RELEASED FOR PART 'B' PERMIT	MBH	KJM	-	081792

REVISIONS

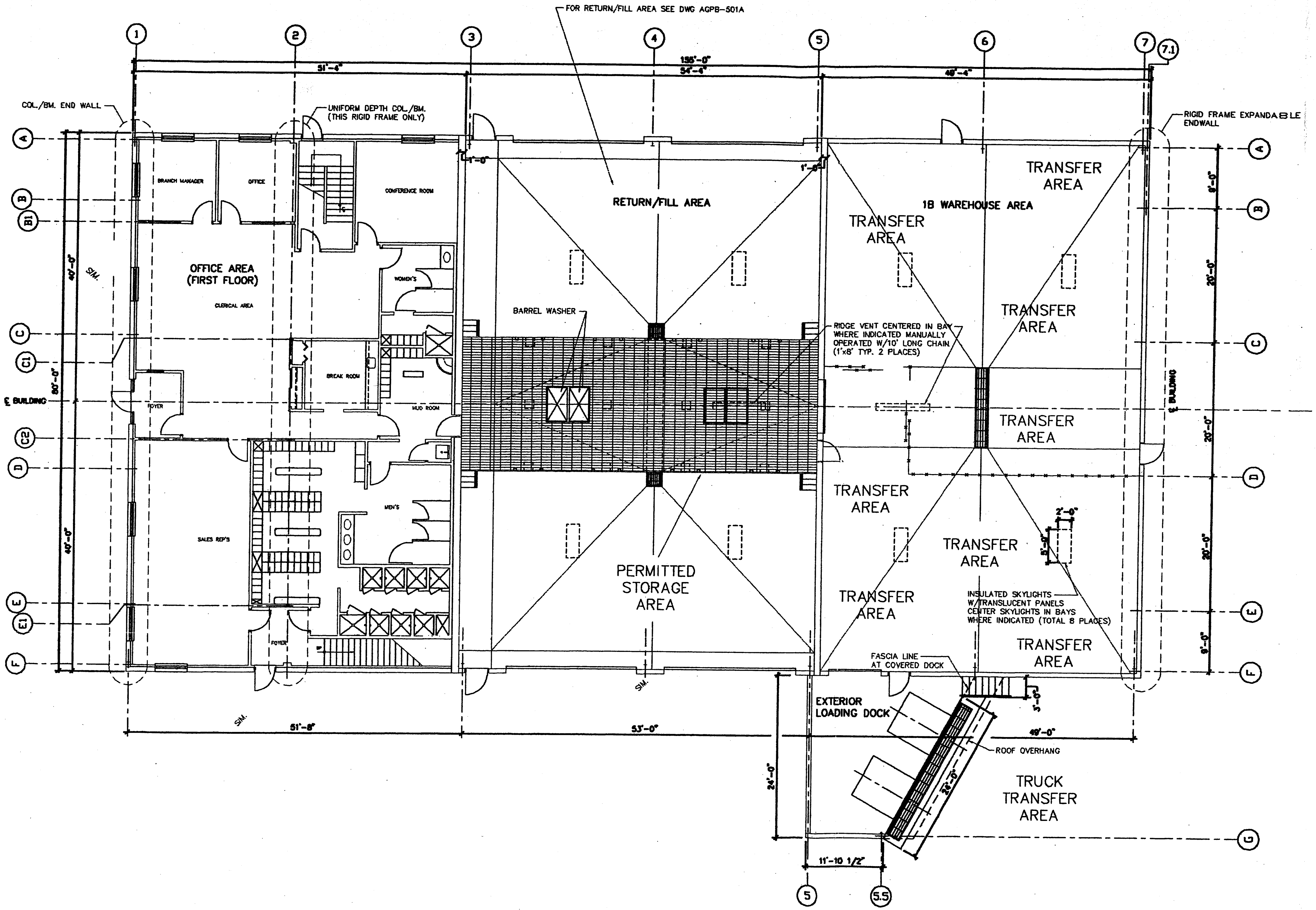
TITLE

SITE PLAN EXISTING

SAFETY-KLEEN SYSTEMS, INC.
5400 LEGACY DR. CLUSTER II BLDG. 3 PLANO, TX. 75024 800-669-5740

SCALE	BY	CHKD	APPROVED	OPERATIONS	DATE
1"=30'-0"	MBH	KJM	-	-	08-11-92

SERVICE CENTER LOCATION	SC-DWG NUMBER	REV. NO.
SYRACUSE, N.Y.	7051-SP00-001	C



FLOOR PLAN

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

STATE OF NEW YORK
LICENSED PROFESSIONAL ENGINEER
No. 060292-1

GENERAL NOTES

1. NON-PERMITTED AREAS MAY CHANGE.
2. PERMITTED AREAS MAY CHANGE DUE TO CONSTRUCTION AND/OR MAINTENCE/UPKEEP OF FACILITY.

NO.	DESCRIPTION	BY	CHK	APPR	DATE
B	UPDATED	NDE	NDE		030300
A	RELEASED FOR PART "B" PERMIT	MO'C	KJM		081392

REVISIONS

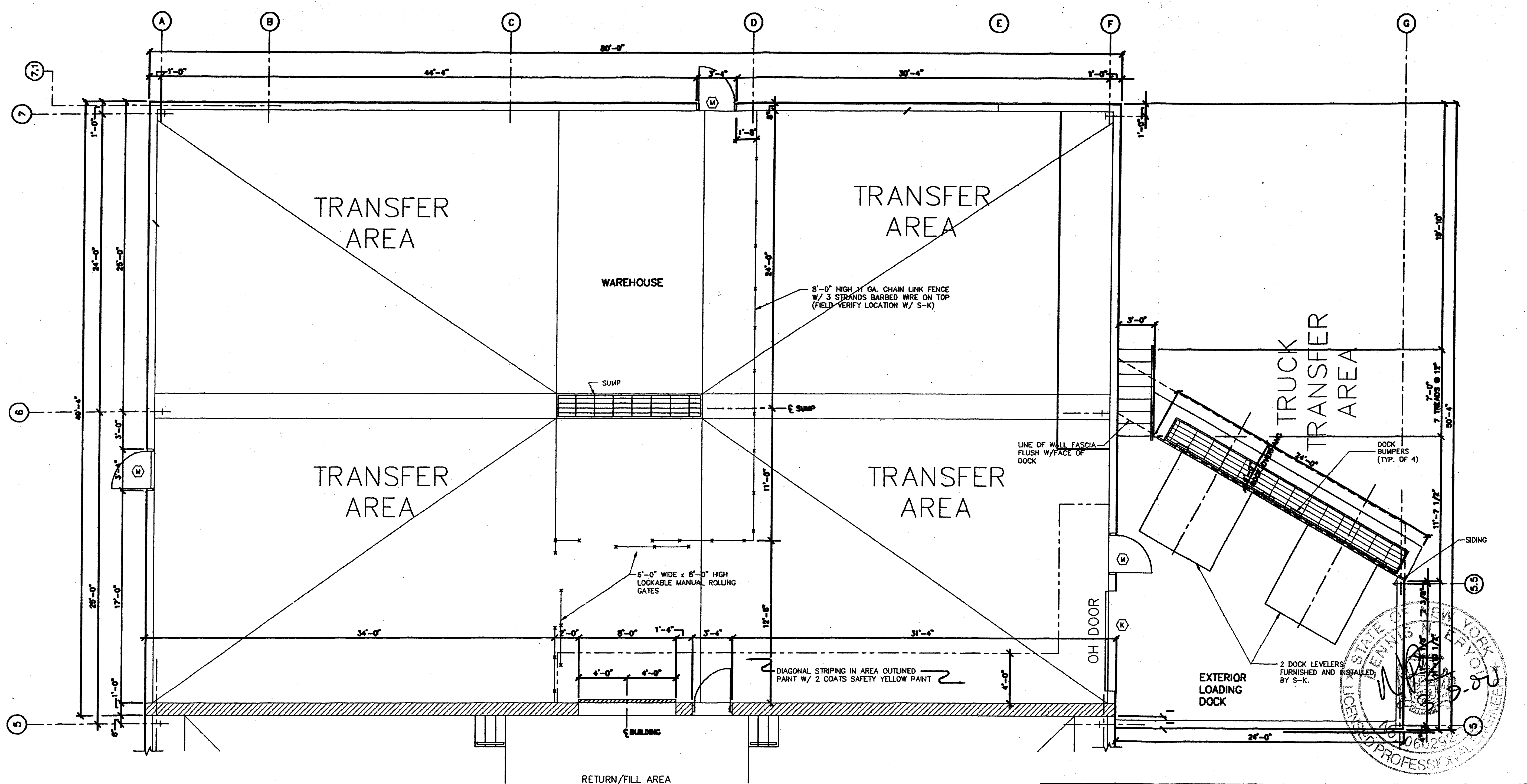
TITLE

155' BUILDING
FLOOR PLAN

SAFETY-KLEEN CORP.
777 BIG TIMBER ROAD ELGIN, ILLINOIS 60123 PHONE 708-697-8460

SCALE	BY	CHKD	P.E. APPR	OP. APPR	DATE
AS NOTED	MO'C				8/14/92

SERVICE CENTER LOCATION	SC-DWG-REV NO.	SHEET NO.
DEWITT, NY	AGPB700A	18



FLOOR PLAN

SCALE: 1/4" = 1'-0"

CONTAINMENT CALCULATIONS

WAREHOUSE (47.67'×78.67' INSIDE)	SUMP SLOPED FLOOR PALLET DISPLACEMENT NET CONTAINMENT	487 GALLONS 2,568 GALLONS -83 GALLONS 2,972 GALLONS
EXTERIOR LOADING DOCK (2' x 22' SUMP)	SUMP PALLET DISPLACEMENT NET CONTAINMENT	647 GALLONS N/A 647 GALLONS

PROPRIETARY STATEMENT

GENERAL NOTES

1. DIMENSIONING ON ALL PLANS IS TO FACE OF STUD (ACTUAL WIDTH), FACE OF MASONRY (NOMINAL WIDTH), OR FACE OF ROUGH OPENING.
2. INSIDE WALLS ON 3 SIDES TO BE LINED W/ 3/4"x8'-0" HIGH PLYWOOD. SEE DETAIL 1, DWG. 7012.
3. NON-PERMITTED AREAS MAY CHANGE DUE TO MAINTENANCE/ UPKEEP OF THE FACILITY.

NO.	DESCRIPTION	BY	CHK	APPR	DATE
B	UPDATED	NDE	NDE		030300
A	RELEASED FOR PART "B" PERMIT	MO'C	KJM		0396

REVISIONS

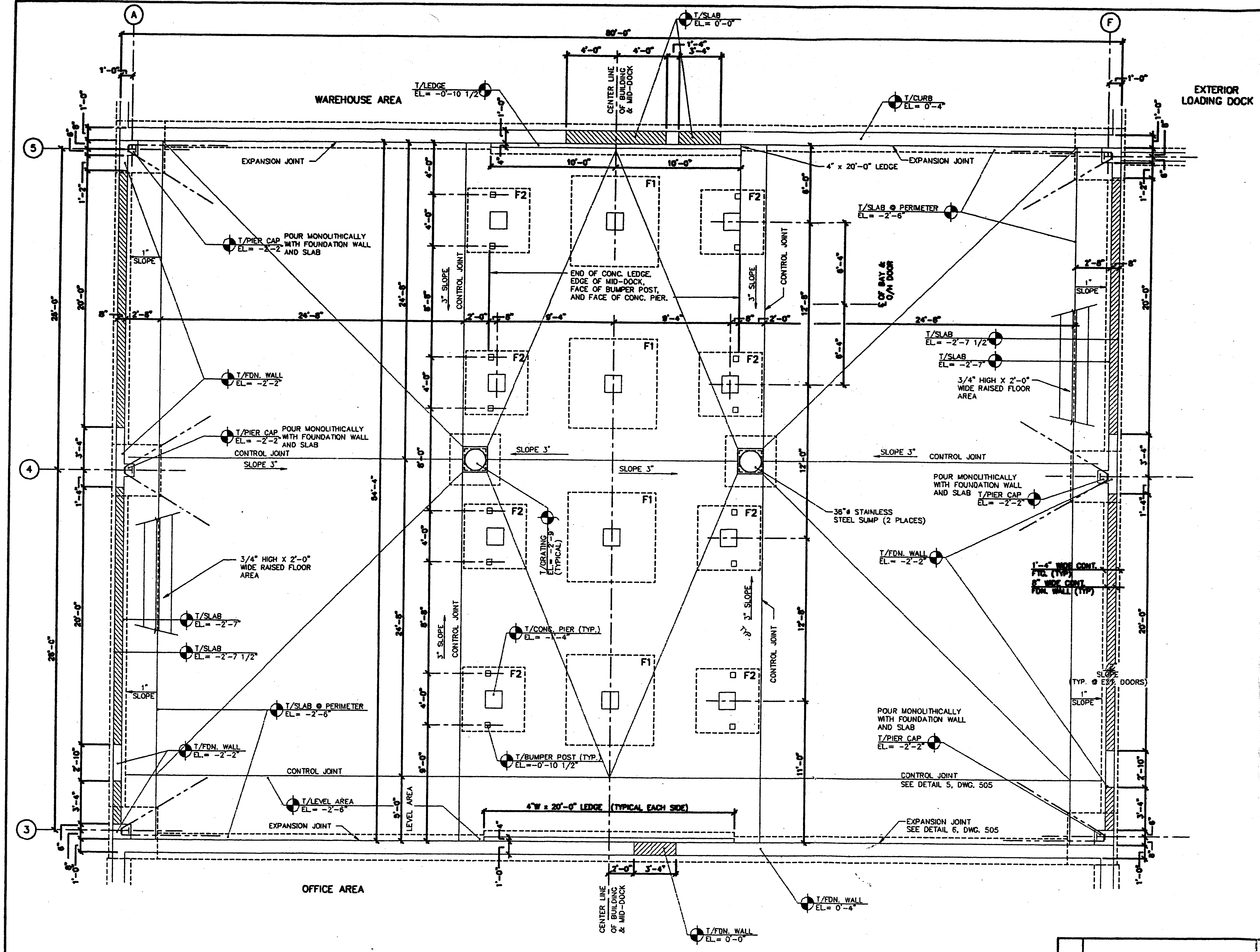
TITLE

WAREHOUSE AREA FLOOR PLAN

SAFETY-KLEEN CORP.
777 BIG TIMBER ROAD ELGIN, ILLINOIS 60123 PHONE 708-697-8460

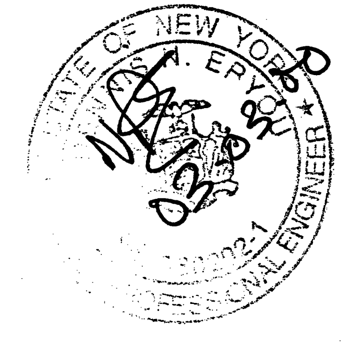
SCALE	BY	CHKD	APPROVED	OPERATIONS	DATE
AS NOTED	MBH	NDE	NDE	DP	03/07/96

SERVICE CENTER LOCATION	SC-DWG NUMBER	REV. NO.
DEWITT, NY	AGPB705A	A



FOUNDATION PLAN

SCALE: 1/4" = 1'-0"



CONTAINMENT CALCULATION

RETURN/FILL (49.33'x73.33' RETURN/FILL (49.33'x73.33' INSIDE)	SUMPS	282 GALLONS
	SLOPED FLOOR	2,256 GALLONS
	CURB	91 GALLONS
	(RAISED FLOOR AREA)	1,808 GALLONS
	PALLET DISPLACEMENT	N/A
	NET CONTAINMENT	4,346 GALLONS

PROPRIETARY STATEMENT

TITLE

RETURN/FILL AREA FOUNDATION PLAN

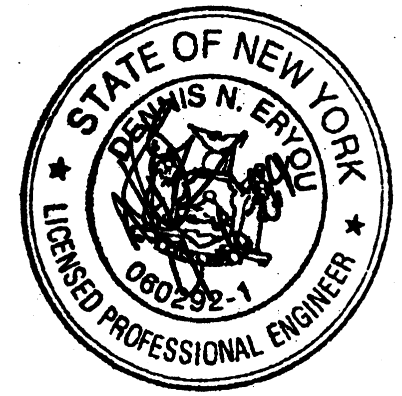
SAFETY-KLEEN CORP.
777 BIG TIMBER ROAD ELGIN, ILLINOIS 60123 PHONE 708-697-8460

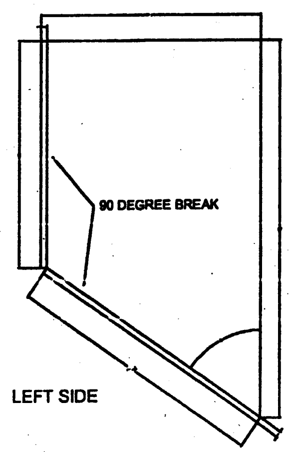
NO.	DESCRIPTION	BY	CHK	APPR	DATE
B	UPDATED	NDE	NDE		030300
A	RELEASED FOR PART "B" PERMIT	MO'C	KJM		082492

REVISIONS

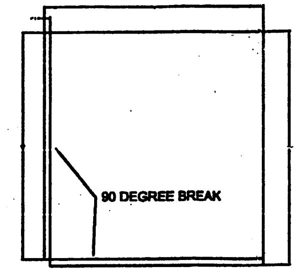
SCALE	BY	CHKD	P.E. APPR	OP. APPR	DATE
AS NOTED	MO'C				8/24/92

SERVICE CENTER LOCATION	SC-DWG-REV NO.	SHEET NO.
DEWITT, NY	AGPB501A	15

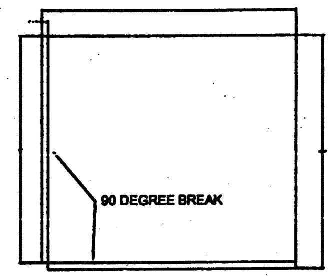




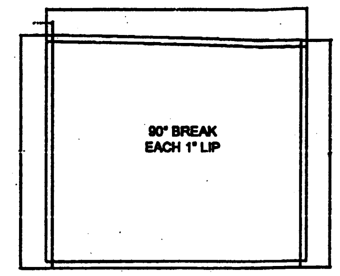
LEFT SIDE



RIGHT SIDE

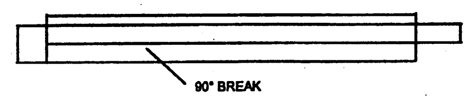


BACK

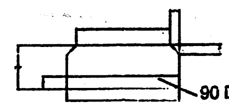


TOP

NOTES:
CONSTRUCTION MATERIAL IS 14 GA. STEEL UNLESS OTHERWISE NOTED
MISC. MATERIAL:
1" X 2" STEEL TUBE:
1 EA. 60"
1 EA. 47-1/2"
1 EA. 39-1/2"
2 EA. 15-1/2"
3/4" X 3/4" SQUARE TUBE
1 EA. 36"
1 EA. 24"
2" X 1-1/2" X 3/16" STEEL ANGLE
1 EA. 18"

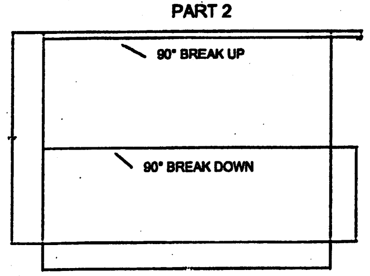


EXTERIOR BRACE:
OUTSIDE FRONT PANEL

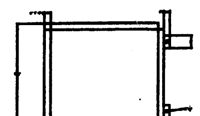


MOUNTING BRACKET FOR
CURTAIN BARREL ENCLOSURE
3/16" PLATE

CURTAIN
BARREL ENCLOSURE
PART 2



CURTAIN
BARREL ENCLOSURE
PART 1



2 EA. REQUIRED
1 LEFT - 1 RIGHT
90° 1" BREAK DOWN

BARREL WASHER ENCLOSURE MODIFICATION

COMPANY:

MILLER STEEL

121 EXPOSITION STREET, DENTON, TEXAS 76201

SCALE	DRAWN BY	GRAPH BY	CHECKED BY	DATE	SHEET NO.
	bwl	bwl		15 JAN 04	2

"BARREL WASHER" AND
"BARREL WASHER ENCLOSURE
MODIFICATION"
IS THE PROPRIETARY
CONCEPT, DESIGN AND SOLE
PROPERTY OF MILLER STEEL

1. SEE DRAWING BSD 951 FOR ASSEMBLY.
2. DRAWINGS ARE PROVIDED TO ILLUSTRATE THE CONCEPT OF A SLIDING DOOR ADDED TO A SAFETY-KLEEN STANDARD DRUM WASHER ONLY.
3. FEATURES ILLUSTRATED ON THESE DRAWINGS MAY BE ALTERED TO FACILITATE FABRICATION.
4. DRAWINGS ARE PROVIDED FOR THE PURPOSE OF INFORMATION TO REGULATORY AGENCIES ONLY.
5. CONCEPTS ARE CONFIDENTIAL AND MAY NOT BE REPRODUCED WITHOUT PERMISSION OF SAFETY-KLEEN SYSTEMS, INC., ENGINEERING DEPARTMENT OR MILLER STEEL.

Solutions
Companies
1300 Boone Industrial Drive · Suite 200 · Columbia · MO 65202 · Phone: (573) 445-7100 · Fax: (573) 443-7181 ·

NO.	DESCRIPTION	BY	CHK	APPR	DATE

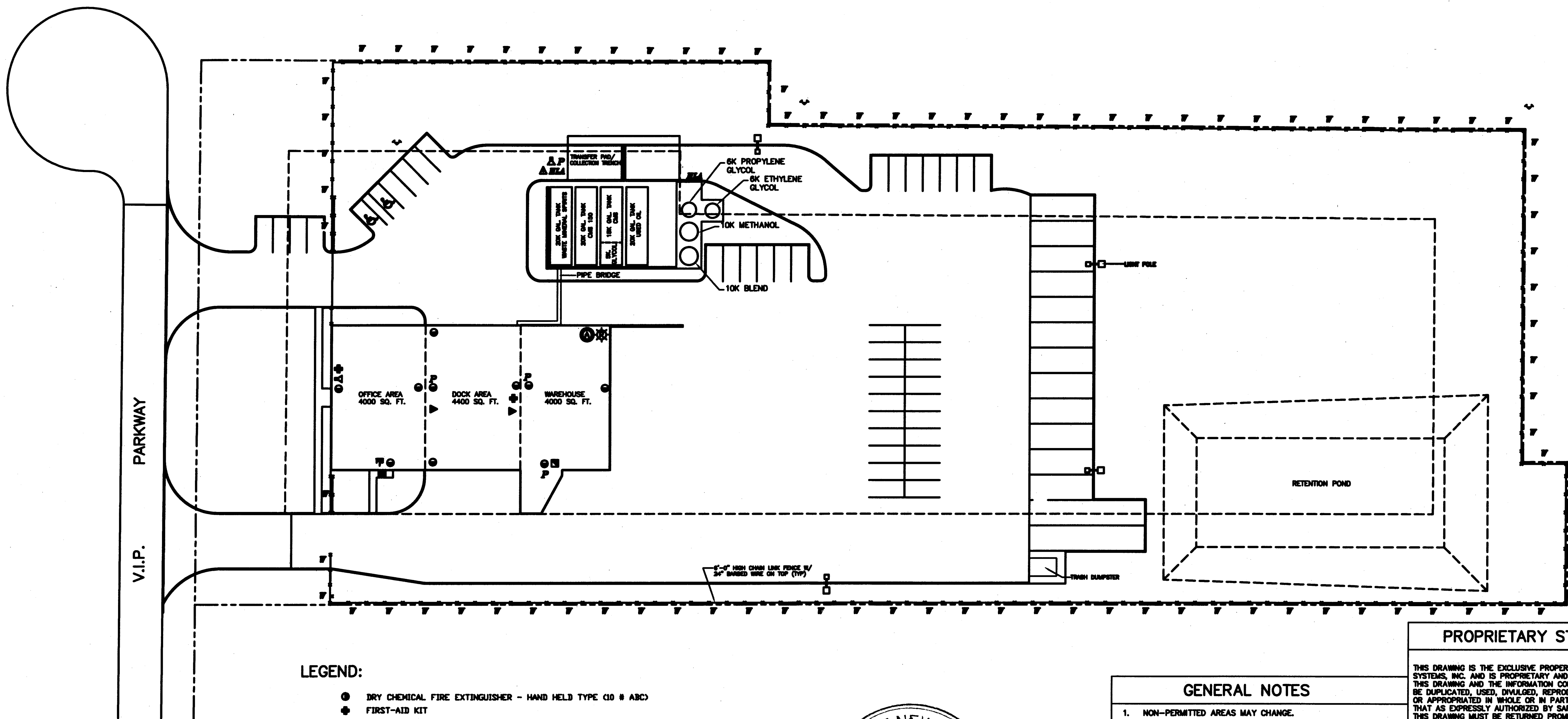
REVISIONS

TITLE

BARREL WASHER
MODIFICATIONS

SAFETY-KLEEN SYSTEMS, INC.
5400 LEGACY DR. CLUSTER II BLDG. 3, PLANO, TX 75024 800-669-5740

SCALE	BY	CHKD	APPROVED	OPPERATIONS	DATE
N.T.S.	JCK	-	SC	-	2-6-04
SERVICE CENTER STANDARDS FABRICATION		BSD 952			0



LEGEND:

- DRY CHEMICAL FIRE EXTINGUISHER - HAND HELD TYPE (10 # ABC)
- FIRST-AID KIT
- SAFETY SHOWER WITH EYE WASH FOUNTAIN
- EYEWASH ONLY OR HANDSPRAY
- SPILL BOX
- SPRINKLER ALARM
- ALERT (HORN)
- SPRINKLER RISER
- HYDRANT - WATER
- PULL STATION
- PANIC BUTTON
- HLA HIGH LEVEL ALARM
- WARNING SIGN

STATE OF NEW YORK
LICENSED PROFESSIONAL ENGINEER

GENERAL NOTES

1. NON-PERMITTED AREAS MAY CHANGE.
2. ACTUAL EQUIPMENT LOCATION MAY VARY DUE TO CONSTRUCTION AND/OR MAINTENANCE/UPKEEP OF FACILITY.

PROPRIETARY STATEMENT

Project Solutions Companies
1300 Boone Industrial Drive • Suite 200 • Columbia • MO 65202
• Phone: (573) 443-7100 • Fax: (573) 443-7101 •

TITLE

EMERGENCY EQUIPMENT LOCATION PLAN

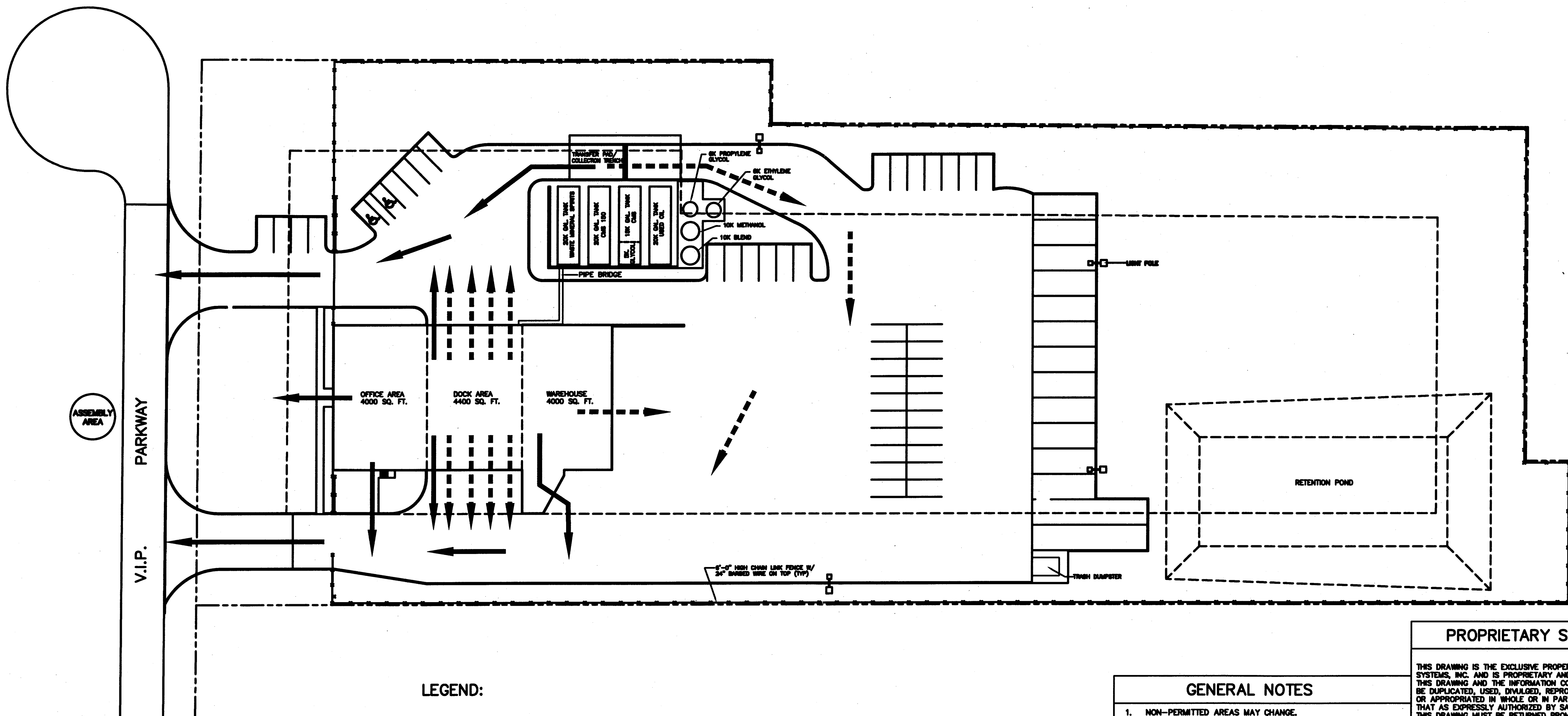
SAFETY-KLEEN SYSTEMS, INC.
5400 LEGACY DR. CLUSTER II BLDG. 3 PLANO, TX. 75024 800-669-5740

NO.	DESCRIPTION	BY	CHK	APPR	DATE
C	REVISE TANK LAYOUT	JEK	MH	MH	042810
B	ADD W.W.F. TANKFARM	JEK	MH	MH	080708
A	RELEASED FOR PART "B" PERMIT	MBH	KJM	-	081792

REVISIONS

SCALE	BY	CHKD	APPROVED	OPERATIONS	DATE
1"=30'-0"	R.D.	KJM			08-14-92

SERVICE CENTER LOCATION	SC-DWG NUMBER	REV. NO.
SYRACUSE, N.Y.	7051-SP00-005	C



LEGEND:

PRIMARY ROUTE

SECONDARY ROUTE

GENERAL NOTES

1. NON-PERMITTED AREAS MAY CHANGE.

PROPRIETARY STATEMENT

Project Solutions Companies
1300 Boone Industrial Drive • Suite 200 • Columbia • MO 65202
• Phone: (573) 443-7100 • Fax: (573) 443-7181 •

STATE OF NEW YORK
LICENSED PROFESSIONAL ENGINEER
060292

TITLE

EMERGENCY EVACUATION PLAN

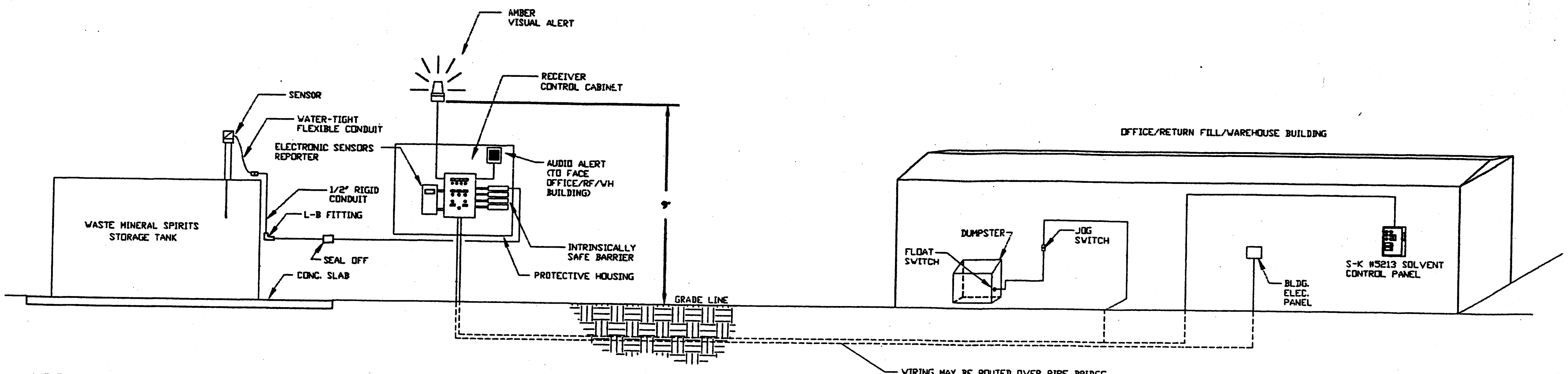
SAFETY-KLEEN SYSTEMS, INC.
5400 LEGACY DR. CLUSTER II BLDG. 3 PLANO, TX. 75024 800-669-5740

NO.	DESCRIPTION	BY	CHK	APPR	DATE
C	REVISE TANK LAYOUT	JEK	MH	MH	042610
B	ADD W.V.F. TANKFARM	JEK	MH	MH	080709
A	RELEASED FOR PART "B" PERMIT	MBH	KJM	-	081792

REVISIONS

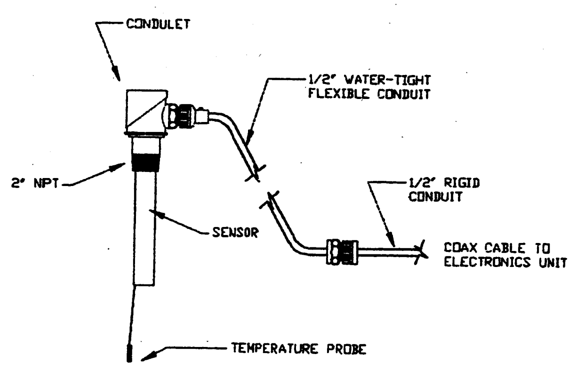
SCALE	BY	CHKD	APPROVED	OPERATIONS	DATE
1"=30'-0"	MBH				08-13-92

SERVICE CENTER LOCATION	SC-DWG NUMBER	REV. NO.
SYRACUSE, N.Y.	7051-SP00-002	C



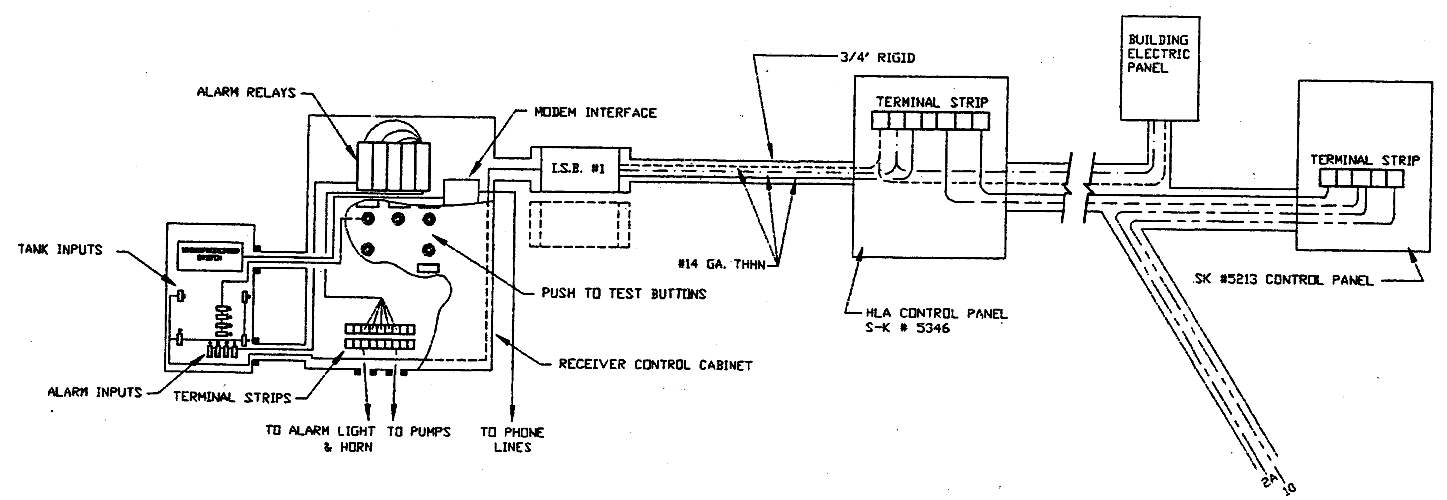
HIGH LEVEL ALARM SYSTEM DIAGRAM

SCALE: NONE



SENSOR AND CONDULET DETAIL

SCALE: NONE



TYPICAL TANK HLA SYSTEM CONTROL WIRING LAYOUT

SCALE: NONE

PROPRIETARY STATEMENT

1. HLA LOW VOLTAGE OPERATING REQUIREMENTS:
   - A. POWER REQUIREMENT 13 TO 28 VDC.
   - B. OUTPUT 4 - 10 mA (ALARM STATE) 15 - 25 mA (NORMAL STATE)
   - C. OPERATING TEMP. -40°F TO +140°F
   - D. SHIELD-TO-GROUND LOADING: 25 ohm MIN. RESISTANCE
   - E. RFI EFFECT: LESS THAN 2 pF SHIFT IN OPERATING POINT FOR UNIT IN EXPLOSION-PROOF HOUSING FROM 5 W FIELD @ 27, 150, OR 450 mHZ AT A DISTANCE OF 5 FT. FROM EXPOSED CABLE OF SIGNAL WIRE.
   - F. FAIL-SAFE: SWITCHABLE FROM EITHER LOW-LEVEL FAIL-SAFE (LLFS) OR HIGH-LEVEL FAIL-SAFE (HLFS).
2. ALL ELECTRICAL WITHIN 10 FT. OF TANK TO BE CLASS 1, DIV. 2, PER LOCAL CODE. SEE SITE UTILITY PLAN FOR ADDITIONAL SPECIFICATIONS.
3. ACTUAL WIRING CONFIGURATION MAY CHANGE DUE TO CONSTRUCTION AND/OR MAINTENANCE/UPKEEP.

TITLE

ULTRASONIC HIGH LEVEL ALARM - SYSTEM DIAGRAM FOR WASTE MINERAL SPIRITS

SAFETY-KLEEN CORP.

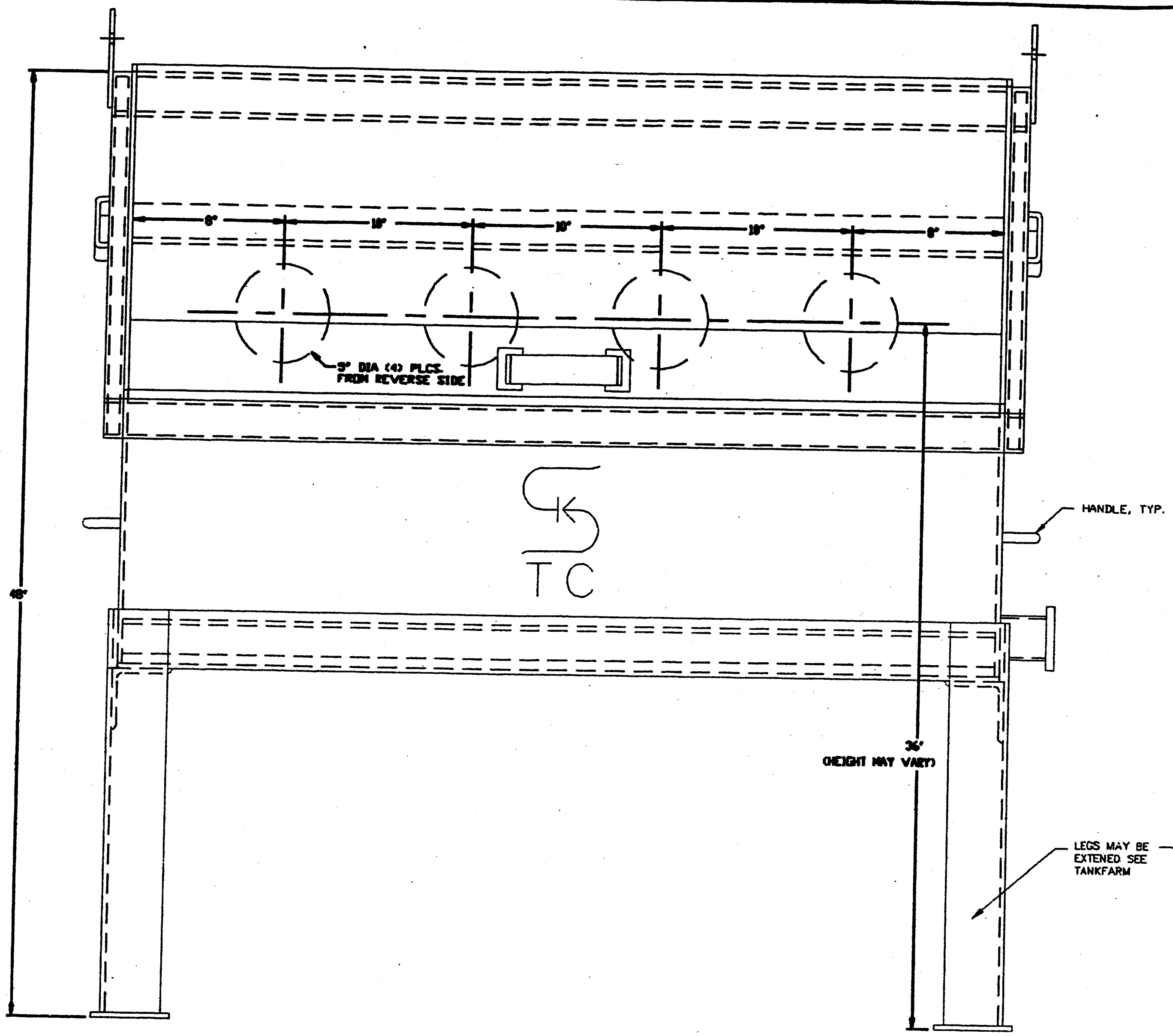
777 BIG TIMBER ROAD ELGIN, ILLINOIS 60123 PHONE 708-697-8460

NO.	DESCRIPTION	BY	CHK	APPR	DATE
B	UPDATED	NDE	NDE	-	030300
A	RELEASED FOR PART 'B' PERMIT	M.O'C	KJM	-	8/13/92

REVISIONS

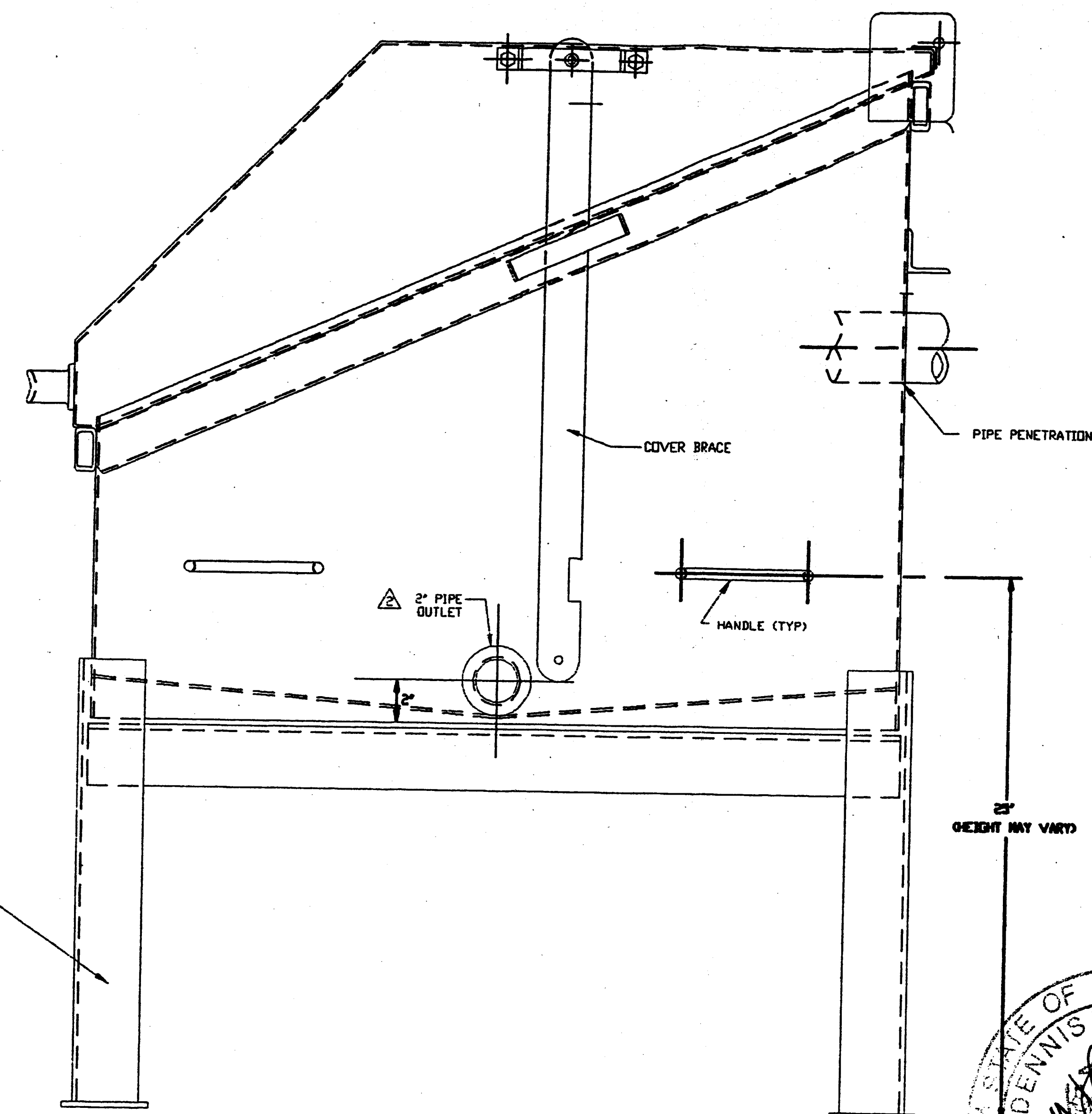
SCALE	BY	CHKD	APPR.	OP. APPR	DATE
NONE	M.O'C	KJM	-	-	2/7/92

SERVICE CENTER LOCATION	SC-DWG NUMBER	REV. NO.
DEWITT, NEW YORK	AGPB-402A	14



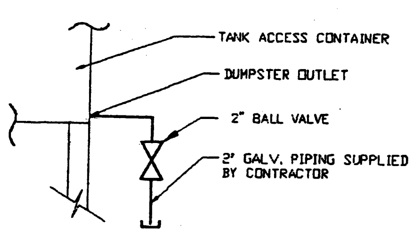
STORAGE TANK ACCESS CONTAINER - FRONT VIEW

SCALE: 1/4"=1"



STORAGE TANK ACCESS CONTAINER - SIDE VIEW

SCALE: 1/4"=1"



DUMPSTER PIPE OUTLET DETAIL

SCALE: NONE

GENERAL NOTES

1. MODIFY TANK ACCESS CONTAINER AS REQUIRED TO SET TANK ACCESS CONTAINER LEVEL WITHIN TANK FARM.
2. ACTUAL PIPING CONFIGURATION MAY VARY DUE TO CONSTRUCTION AND/ OR MAINTENANCE UPKEEP OF FACILTY.

PROPRIETARY STATEMENT

TITLE

TANK ACCESS CONTAINER DETAILS

SAFETY-KLEEN CORP.
777 BIG TIMBER ROAD ELGIN, ILLINOIS 60123 PHONE 708-697-8460

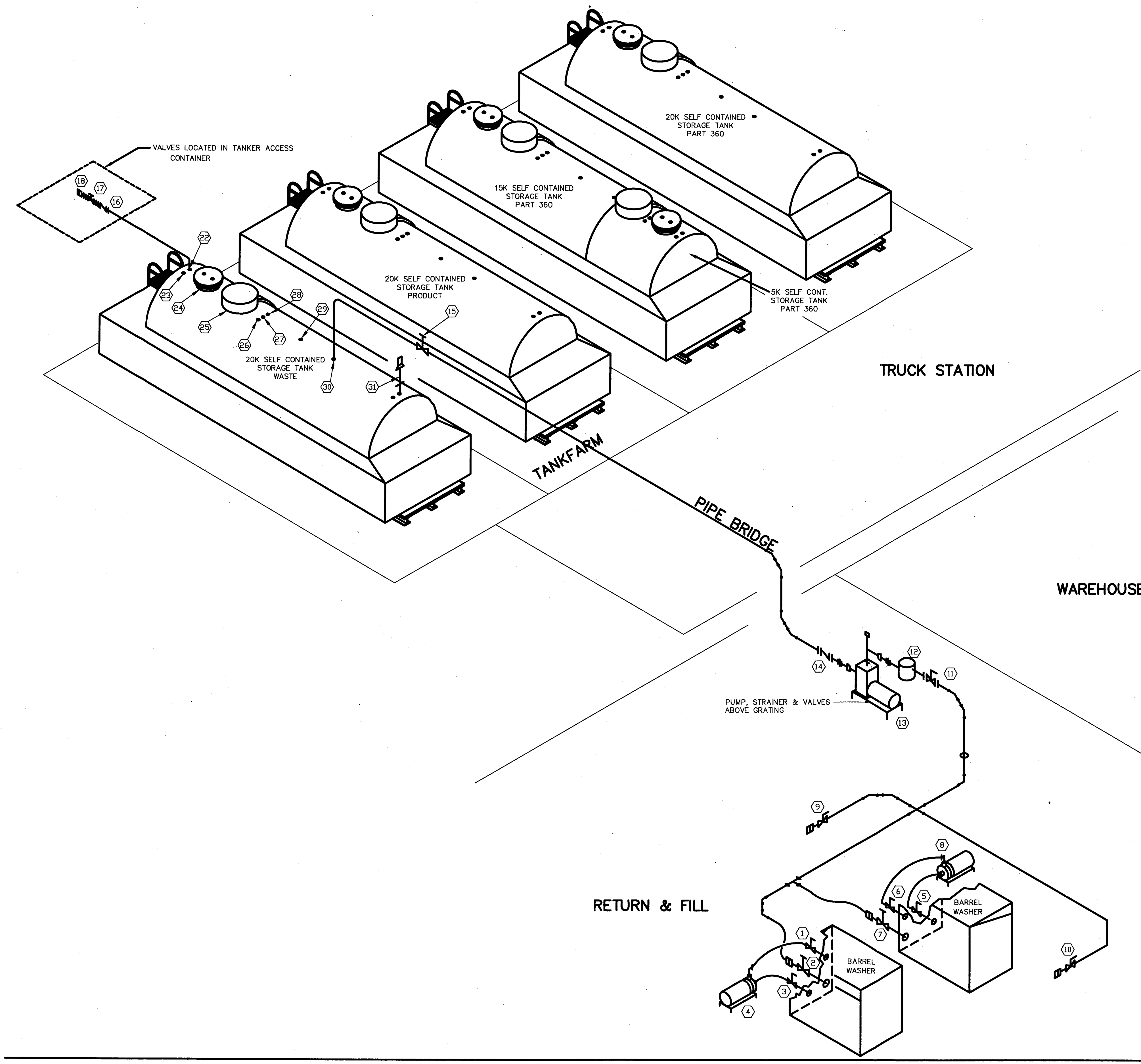
NO.	DESCRIPTION	BY	CHK	APPR	DATE
B	UPDATED	NDE	NDE		030300
A	RELEASED FOR PART "B" PERMIT	MO'C	KLM		081492

REVISIONS

SCALE	BY	CHKD	P.E. APPR	OP. APPR	DATE
AS NOTED	MO'C	KJM			8/14/92

SERVICE CENTER LOCATION	SC-DWG-REV. NO.	SHEET NO.
DEWITT, NY	AGPB201A	12

STATE OF NEW YORK
DENNIS N. ERYOR
03.03
LIC. NO. 060292-1
PROFESSIONAL ENGINEER



EQUIPMENT SCHEDULE

	MARK	DESCRIPTION
	1	1 1/2" BALL VALVE (BARREL WASHER)
	2	2" GATE VALVE
	3	1 1/2" BALL VALVE (BARREL WASHER)
	4	RECIRCULATING PUMP (BARREL WASHER)
	5	1 1/2" BALL VALVE (BARREL WASHER)
	6	1 1/2" BALL VALVE (BARREL WASHER)
	7	2" GATE VALVE
	8	RECIRCULATING PUMP (BARREL WASHER)
	9	2" FLANGED BALL VALVE
	10	2" FLANGED BALL VALVE
	11	2" FLANGED BALL VALVE
	12	STRAINER ASSY.
	13	USED SOLVENT PUMP
	14	2" FLANGED CHECK VALVE
	15	2" GATE VALVE
	16	3" FLANGED CHECK VALVE
	17	3" FLANGED BALL VALVE
	18	3" FLANGED CAM LOCK
	19	
	20	
	21	
	22	SUCTION LINE ASSEMBLY
*	23	BLIND FLANGE
*	24	MANWAY & FLANGE ASSEMBLY
*	25	LOOSE BOLT MANWAY
*	26	FLANGE
*	27	LEVEL GAUGE ASSEMBLY
*	28	FLANGE
*	29	FLANGE
	30	FILL LINE ASSEMBLY
*	31	VENT ASSEMBLY
	32	

* NOT SUBJECT TO SUBPART BB

PROPRIETARY STATEMENT

STATE OF NEW YORK
DENNIS M. ERYOU
060292
LICENSED PROFESSIONAL ENGINEER

Project Solutions Companies
1380 Boone Industrial Drive • Suite 200 • Columbia • MO 65202
• Phone: (573) 443-7100 • Fax: (573) 443-7181 •

NO.	DESCRIPTION	BY	CHK	APPR	DATE
D	REVISED SCHEDULE EQP. TAGS/ADD #15	JEK	MH	MH	072607
C	REVISED TAGGING	JEK	BW		072607
B	UPDATED	NDE	NDE		030300
A	RELEASED FOR PART B PERMIT	NDE	NDE		061392

REVISIONS

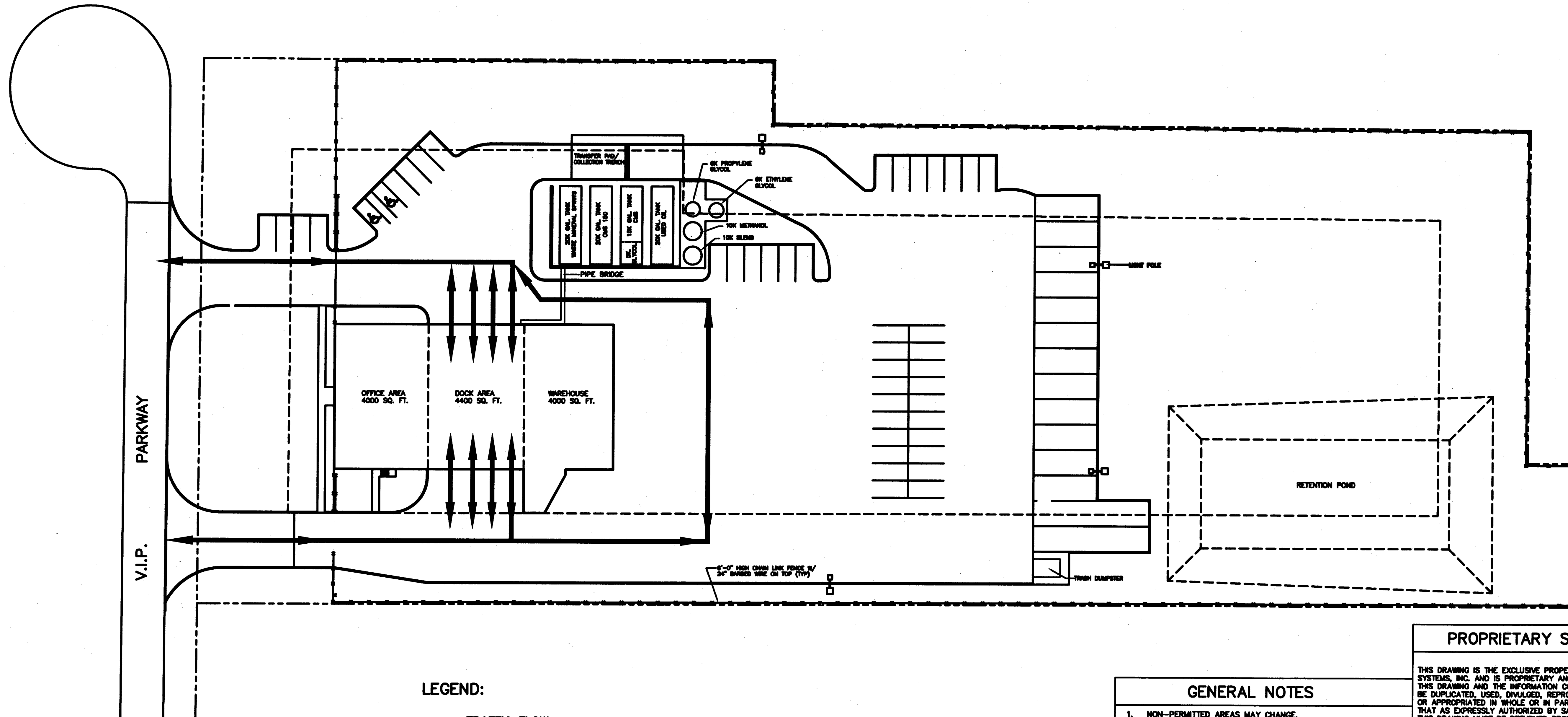
TITLE

ENVIRONMENTAL PIPING SCHEMATIC

SAFETY-KLEEN SYSTEMS, INC.
5400 LEGACY DR. CLUSTER II BLDG 3 PLANO, TX. 75024 800-669-5740

SCALE	BY	CHKD	APPROVED	OPERATIONS	DATE
1=20'-0"	MBH	NDE	NDE	DP	03/07/96

SERVICE CENTER LOCATION	SC-DWG NUMBER	REV. NO.
DEWITT, NY	7051-4100-150	C



LEGEND:

TRAFFIC FLOW →

GENERAL NOTES

1. NON-PERMITTED AREAS MAY CHANGE.

PROPRIETARY STATEMENT

Project Solutions Companies

1300 Boone Industrial Drive • Suite 200 • Columbia • MO 65202 • Phone: (573) 443-7100 • Fax: (573) 443-7101 •

STATE OF NEW YORK
DENNIS N. ERYOU
060292-1
LICENSED PROFESSIONAL ENGINEER

NO.	DESCRIPTION	BY	CHK	APPR	DATE
C	REVISE TANK LAYOUT	JEX	MH	MH	042810
B	ADD V.W.F. TANKFARM	JEX	MH	MH	080708
A	RELEASED FOR PART "B" PERMIT	NBH	KJM	-	081792

REVISIONS

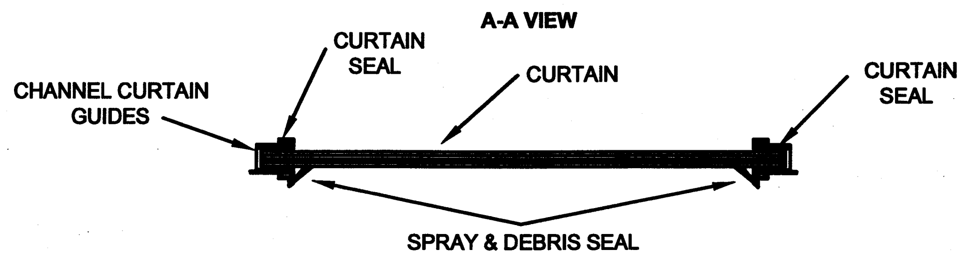
TITLE

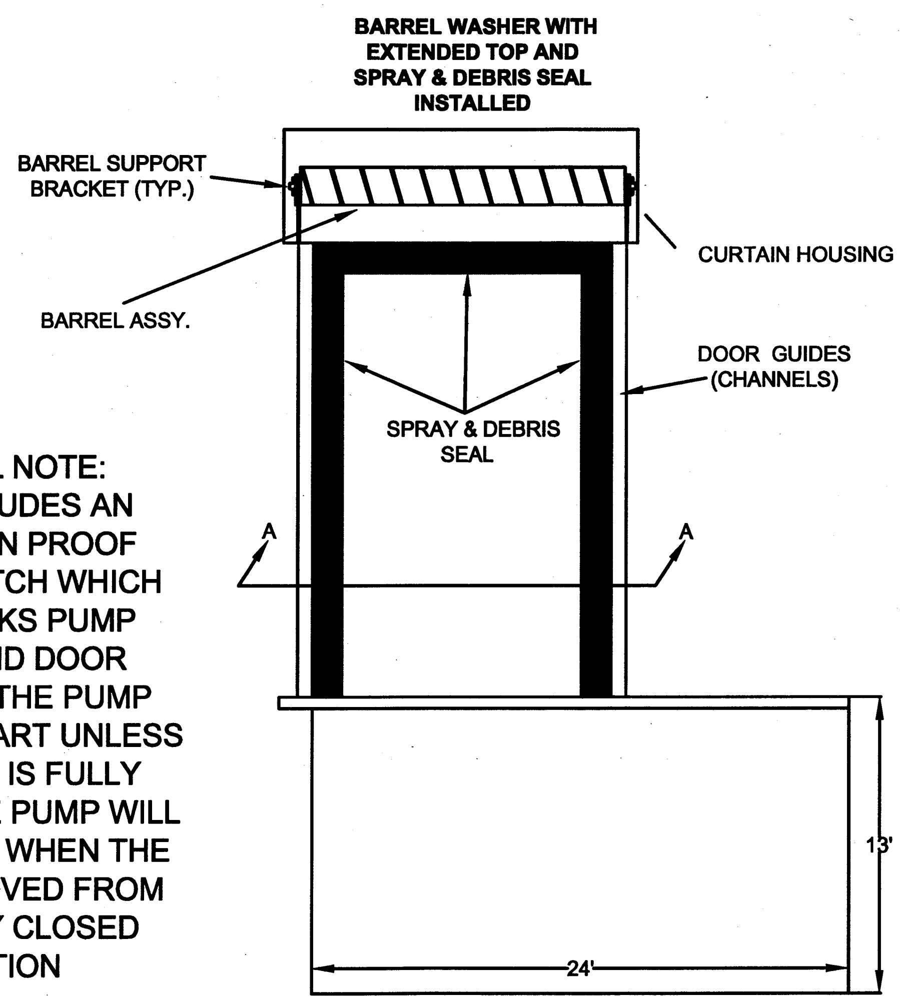
HAZ. WASTE TRAFFIC PATTERN FOR R/F AREA

SAFETY-KLEEN SYSTEMS, INC.
5400 LEGACY DR. CLUSTER II BLDG. 3 PLANO, TX. 75024 800-669-5740

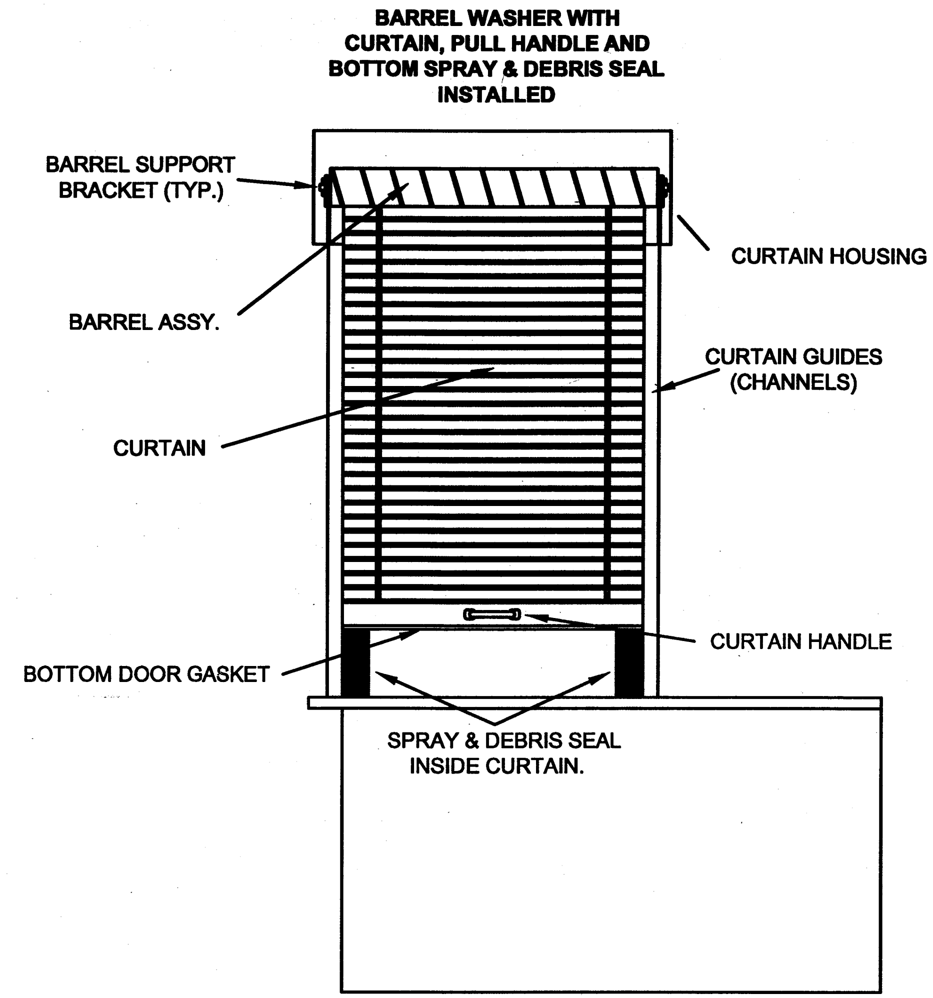
SCALE	BY	CHKD	APPROVED	OPERATIONS	DATE
1"=30'-0"	R.D.				08-13-92

SERVICE CENTER LOCATION	SC-DWG NUMBER	REV. NO.
SYRACUSE, N.Y.	7051-SP00-003	C





SPECIAL NOTE:
UNIT INCLUDES AN EXPLOSION PROOF MICRO SWITCH WHICH INTERLOCKS PUMP START AND DOOR CLOSURE. THE PUMP WILL NOT START UNLESS THE DOOR IS FULLY CLOSED. THE PUMP WILL SHUT DOWN WHEN THE DOOR IS MOVED FROM THE FULLY CLOSED POSITION



BARREL WASHER ENCLOSURE

NOTES:
1. SPRAY & DEBRIS SEAL: 4.5", .350 NYLON, BRUSH MOUNTED TO SIDES AND TOP OF BARREL WASHER OPENING
2. EXTERIOR IS PROTECTED FROM SPRAY AND DEBRIS
3. BRUSH SEAL WILL WITHSTAND 20 MPH WIND MELTING TEMPERATURE: 410° OPERATING TEMPERATURE: 200-230°
4. ROLL-UP DOOR: CURTAIN MATERIAL: EXTRUDED ALUMINUM WITH GASKETED INTERLOCK.
5. FINISH: BRUSHED ALUMINUM.
6. MANUAL OPERATION
7. SEE DRAWING BSD 952 FOR DETAILS.
8. DRAWINGS ARE PROVIDED TO ILLUSTRATE THE CONCEPT OF A ROLL-UP DOOR ADDED TO A SAFETY-KLEEN STANDARD BARREL WASHER ONLY.
9. FEATURES ILLUSTRATED ON THESE DRAWINGS MAY BE ALTERED TO FACILITATE FABRICATION.
10. DRAWINGS ARE PROVIDED FOR THE PURPOSE OF INFORMATION TO REGULATORY AGENCIES ONLY.
11. CONCEPTS ARE CONFIDENTIAL AND MAY NOT BE REPRODUCED WITHOUT PERMISSION OF SAFETY-KLEEN SYSTEMS, INC. ENGINEERING DEPARTMENT.

Project Solutions Companies
1300 Boone Industrial Drive• Suite 200•Columbia• MO 65202
• Phone: (573) 443-7100 • Fax: (573) 443-7181 •

TITLE
—
BARREL WASHER
ROLL–UP DOOR ASSEMBLY

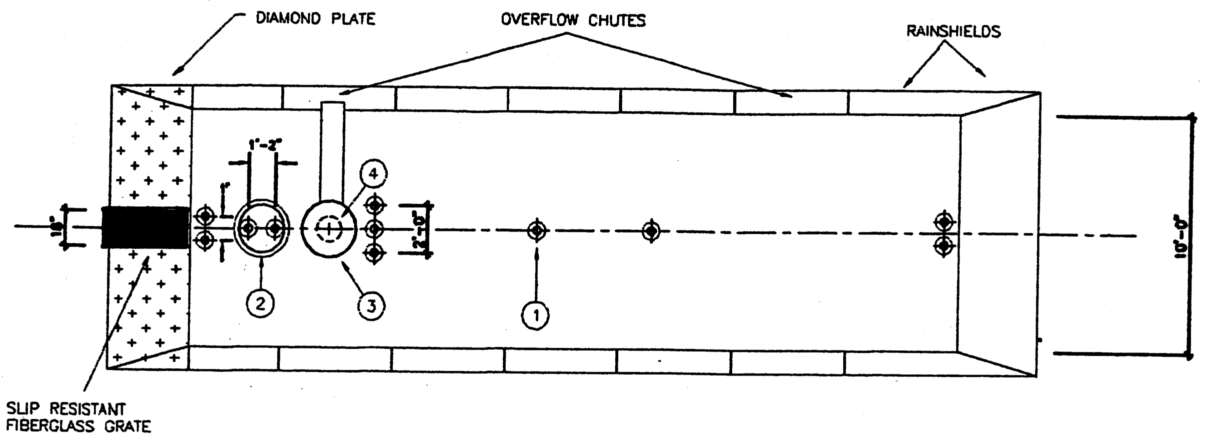
SAFETY-KLEEN SYSTEMS, INC.
5400 LEGACY DR. CLUSTER III BLDG. 3, PLANO, TX. 75024 800-669-5740

SCALE	BY	CHKD	APPROVED	OPPERATIONS	DATE
N.T.S.	JEK	–	BC	–	2-8-04

SERVICE CENTER STANDARDS	SC-DWG NUMBER	REV. NO.
FABRICATION	BSD 951	2

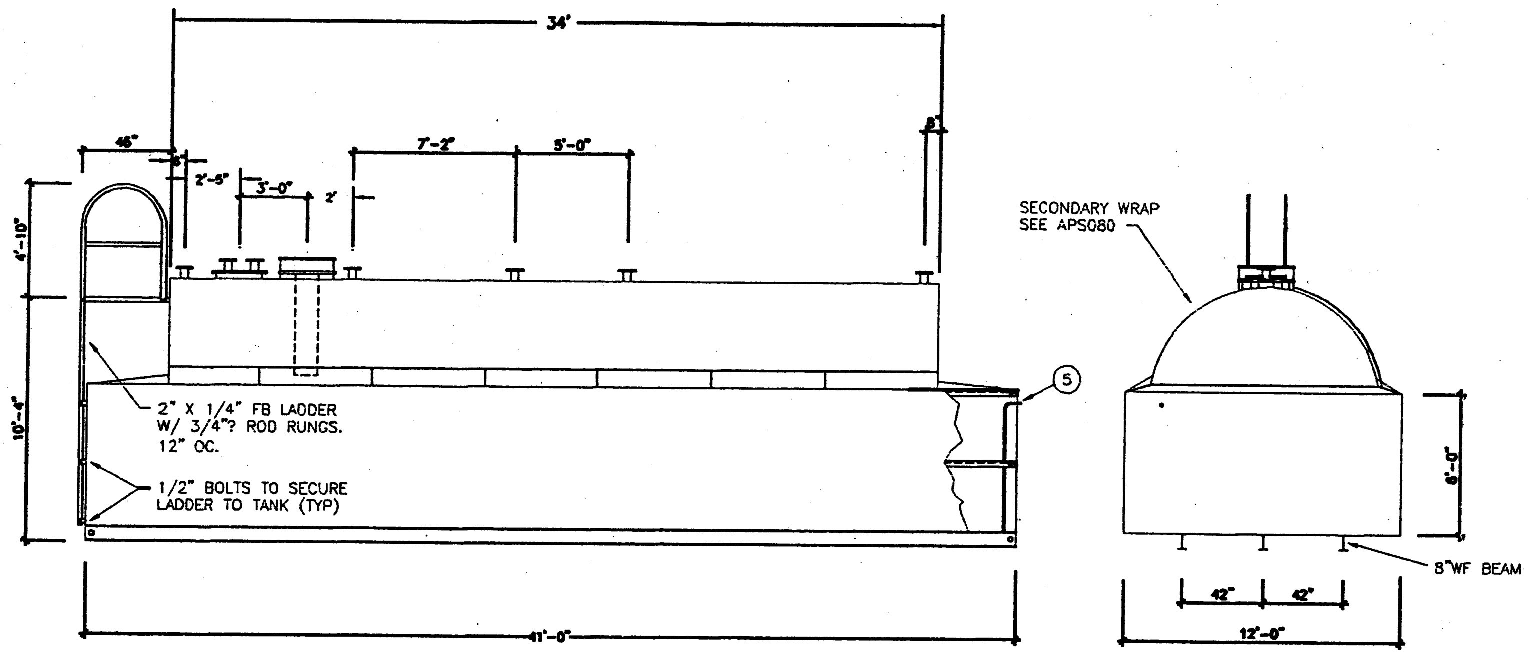
NO.	DESCRIPTION	BY	CHK	APPR	DATE
2	REVISED PER COMMENTS	JEK	MH	MH	073107
1	REVISE NOTES ON SEAL,SPLASH GUARD,BOTTOM SEAL	JEK	DDP	DDP	100305

REVISIONS



NOTES:

1. SHELL: 1/4" HEAD: 5/16" CONTAINMENT: 1/4"
2. MATERIAL – MILD CARBON STEEL
3. TEST – 5 PSIG
4. ENTIRE UNIT UL LISTED.



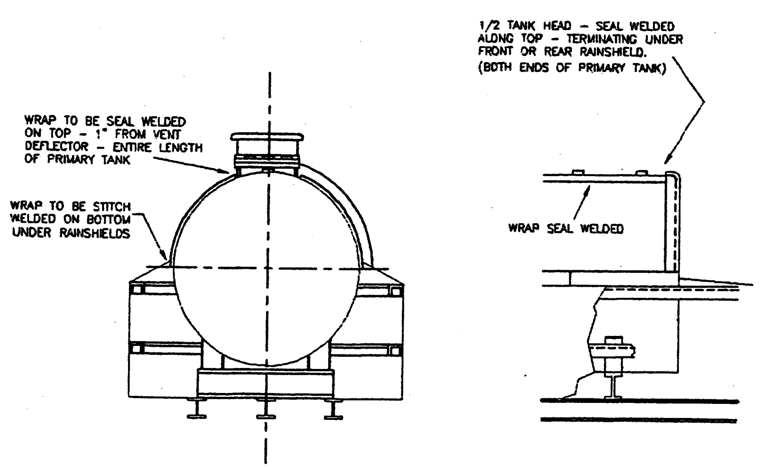
ITEM #	DESCRIPTION
1	4"–150# FLANGE (TYP)
2	24" MANWAY WITH (2) 4" FLANGES
3	VENT DEFLECTOR ASSEMBLY – SHIPPED LOOSE
4	8" – 8 OZ. EMERGENCY VENT SHIPPED LOOSE
5	3/4" ? PUMPOUT PIPE WITH 3" PIPE CAP SUMP.

AREO-POWER®

TITLE	REV #	REV DATE
13000/5000 GAL COMPARTMENT TANK FOR SAFETY KLEEN	1	10/23/91

U.S. PATENT # 4895272 — CANADIAN PATENT APPLIED FOR

SCALE	DATE	DRAWN BY	DWG. NO.
NONE	10/11/91	JF	APS088



NOTES:

1. MATERIAL – MILD CARBON STEEL
2. SECONDARY WRAP – .7 GA.
3. SECONDARY HEAD – 1/4"

AREO-POWER®

TITLE	REV #	REV DATE
SECONDARY WRAP DETAIL	1	10/9/91

U.S. PATENT # 4895272 — CANADIAN PATENT APPLIED FOR

SCALE	DATE	DRAWN BY	DWG. NO.
NONE	9/26/91	JF	APS080

GENERAL NOTES

1. ACTUAL TANK CONFIGURATION MAY VARY DUE TO MANUFACTURER'S REVISIONS.

NO.	DESCRIPTION	BY	CHK	APPR	DATE
B	UPDATED	NDE	NDE		030300
A	RELEASED FOR PART "B" PERMIT	CEW	KJM		081392

REVISIONS

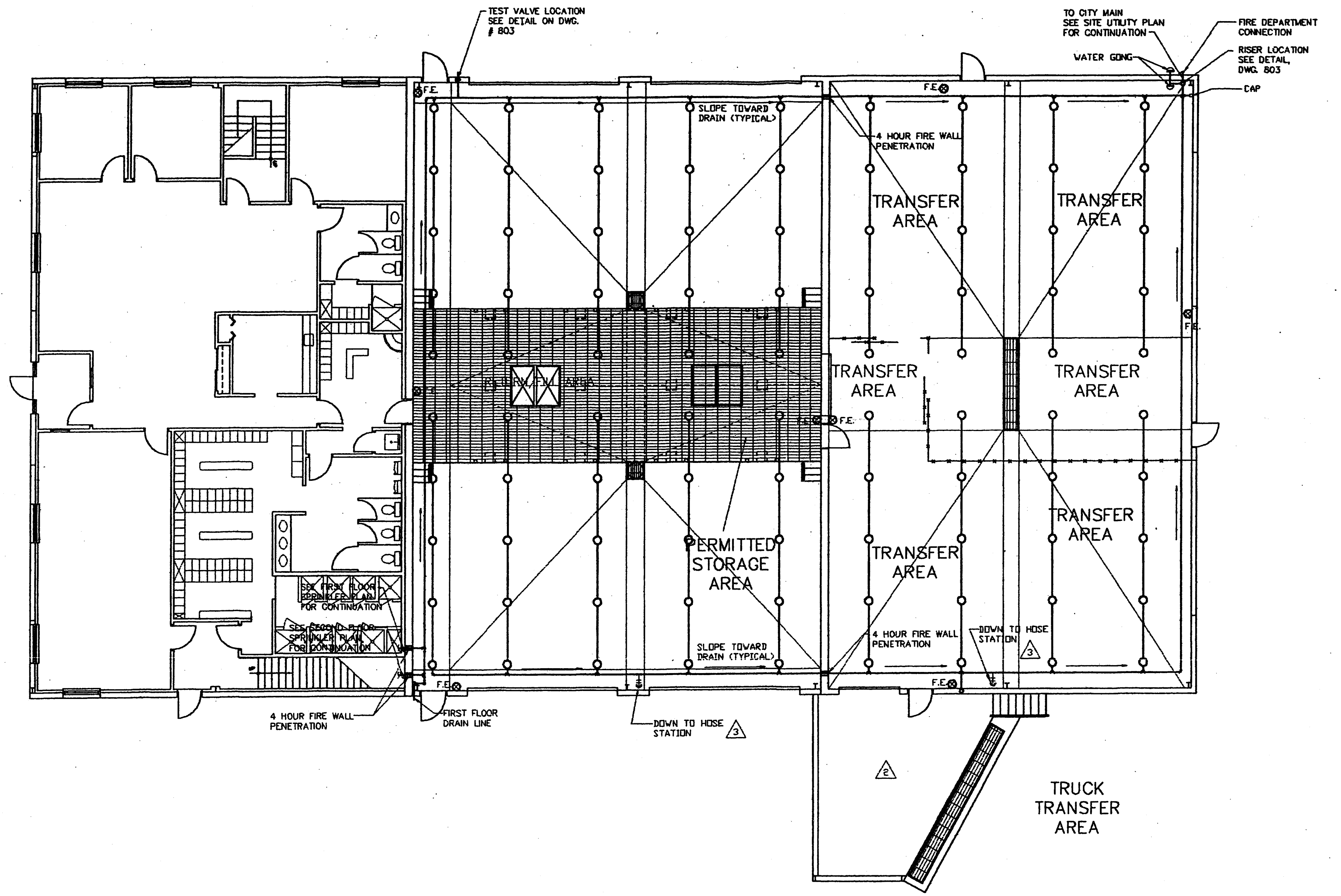
TITLE

TANK FARM 20K STORAGE TANK INSTALLATION DETAILS

SAFETY-KLEEN CORP.
777 BIG TIMBER ROAD ELGIN, ILLINOIS 60123 PHONE 708-697-8460

SCALE	BY	CHKD	P.E. APPR	OP. APPR	DATE
1/4"=1'-0"	CEW	KJM			8/13/92

SERVICE CENTER LOCATION	SC-DWG-REV NO.	SHEET NO.
DEWITT, NY	AGPB101A	08



NORTH RETURN/FILL & 1B WAREHOUSE SCHEMATIC SPRINKLER PLAN

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

PROPRIETARY STATEMENT

GENERAL NOTES

1. LOCATION OF SPRINKLER HEADS IS FOR SCHEMATIC PURPOSES ONLY.
2. PROVIDE DRY SPRINKLER SYSTEM AT LOADING DOCK IF REQUIRED BY LOCAL JURISDICTION
3. PROVIDE 1 1/2" LINED 75 FT. HOSE ON REEL, PER LOCAL JURISDICTION.
4. SEE DRAWING NO. 406 FOR ALARM SYSTEM.
5. RUN ALL PIPE UP CLOSE TO JOISTS.
6. A PREFABRICATED STEEL MEZZANINE ALONG THE WEST WALL OF THE 1B WAREHOUSE, EXTENDING EAST APPROX. 30 FEET, WITH RACKS, WILL BE ADDED AT A FUTURE TIME BY SAFETY-KLEEN. F.S.C. IS TO MAKE ALLOWANCES IN THE SPRINKLER SYSTEM DESIGN FOR THIS FUTURE INSTALLATION.
7. FSC TO MODIFY PIPING LAYOUT AS REQUIRED FOR COST EFFECTIVENESS.

N.D. ERYOU, PhD, PE
CONSULTING ENGINEER
8 IVY PLACE, HUNTINGTON, NY 11743
516-385-9392

NO.	DESCRIPTION	BY	CHK	APPR	DATE
B	UPDATED	NDE	NDE	-	030300
A	RELEASED FOR BID	CEW	KJM	-	072792

REVISIONS

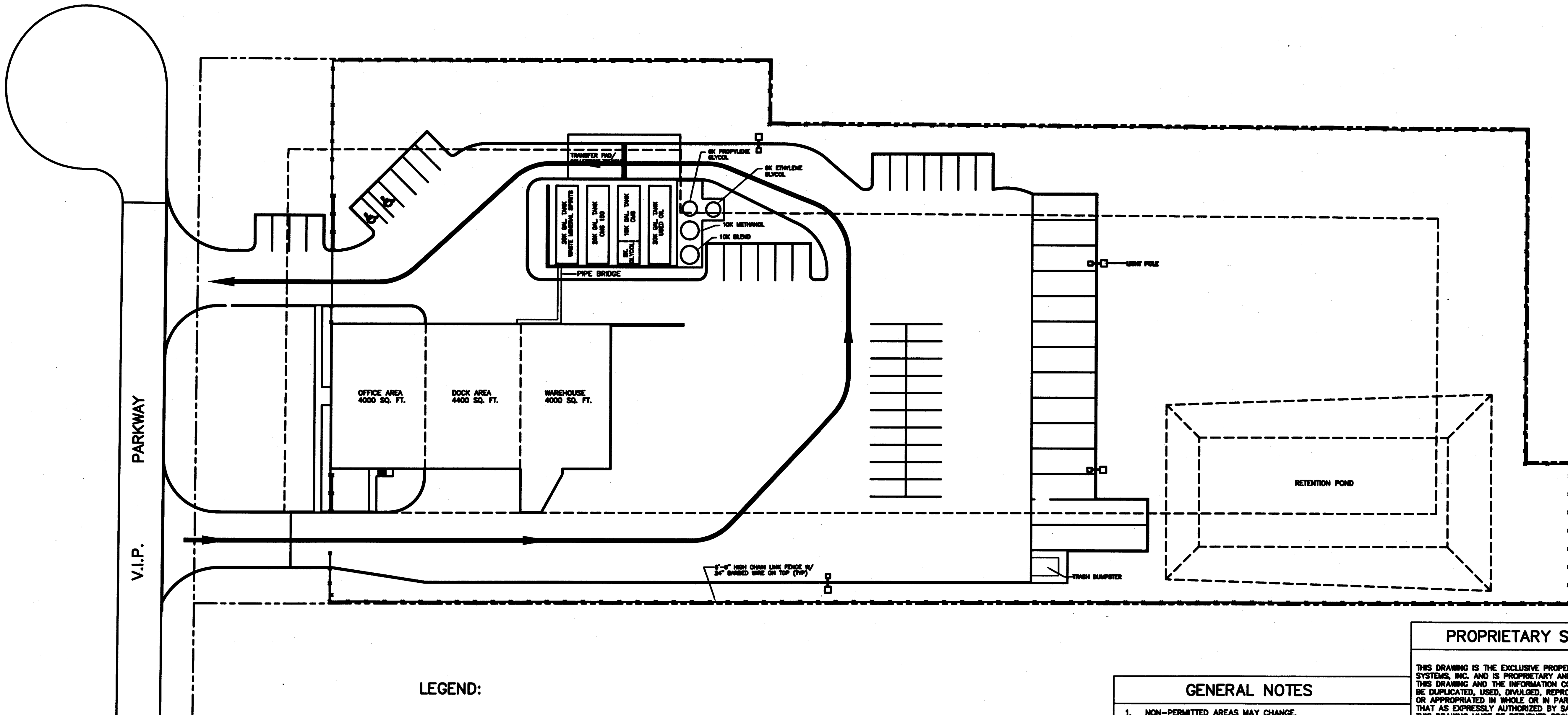
TITLE
RETURN/FILL & 1B WAREHOUSE SCHEMATIC SPRINKLER PLAN

SAFETY-KLEEN CORP.
777 BIG TIMBER ROAD ELGIN, ILLINOIS 60123 PHONE 708-697-8460

SCALE	BY	CHKD	P.E. APPR	OP. APPR	DATE
1/8" = 1'-0"	CEW	KJM			7/25/92

SERVICE CENTER LOCATION	SC-DWG-REV NO.	SHEET NO.
DEWITT, N.Y.	AG06-802-A	20

7/25/92 12:00pm 8002-Q.DWG



LEGEND:

TRAFFIC FLOW

GENERAL NOTES

1. NON-PERMITTED AREAS MAY CHANGE.

PROPRIETARY STATEMENT

Project Solutions Companies
1300 Boone Industrial Drive • Suite 200 • Columbia • MO 65202
• Phone: (573) 443-7100 • Fax: (573) 443-7181 •

TITLE

HAZ. WASTE TRAFFIC PATTERN FOR TANKFARM

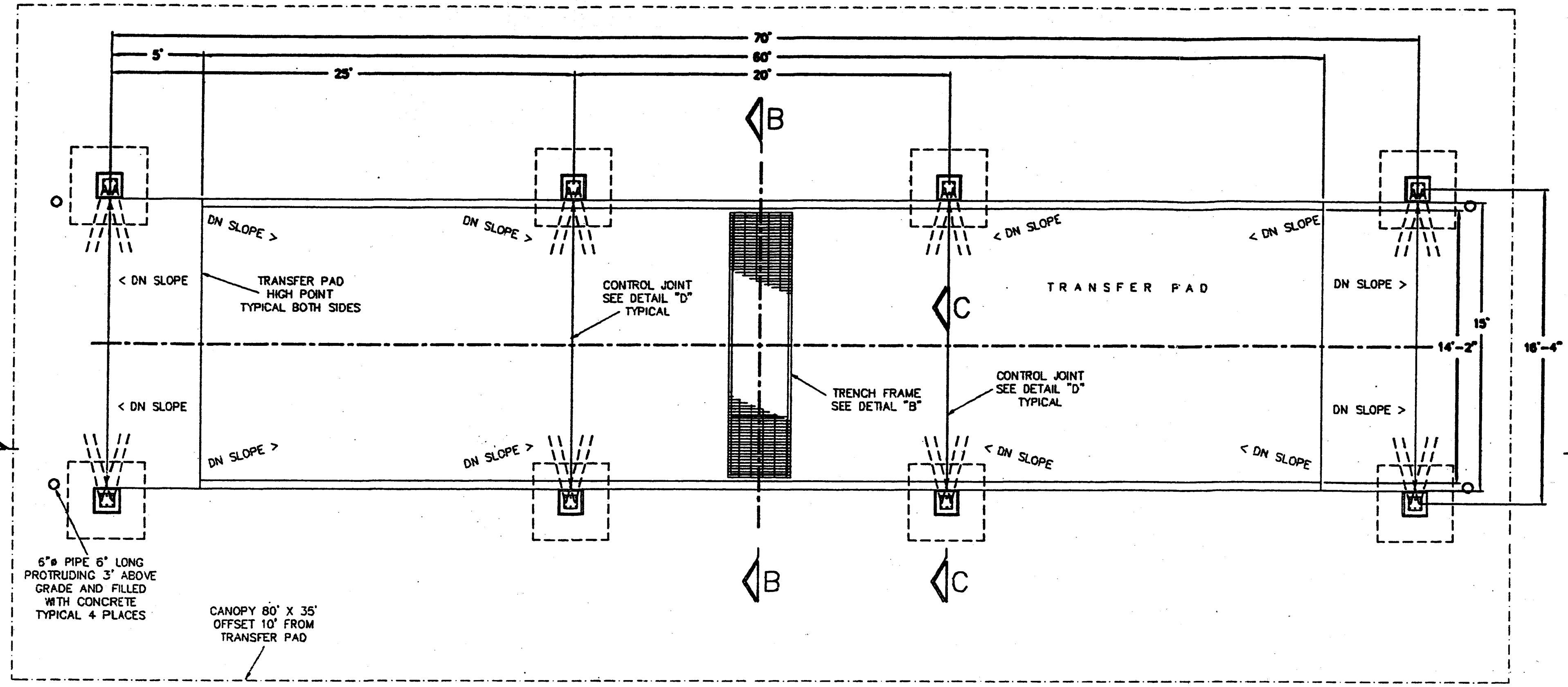
SAFETY-KLEEN SYSTEMS, INC.
5400 LEGACY DR. CLUSTER II BLDG. 3 PLANO, TX. 75024 800-669-5740

NO.	DESCRIPTION	BY	CHK	APPR	DATE
C	REVISE TANK LAYOUT	JEK	MH	MH	042810
B	ADD W.W.F. TANKFARM	JEK	MH	MH	080708
A	RELEASED FOR PART 'B' PERMIT	MBH	KJM	-	081792

REVISIONS

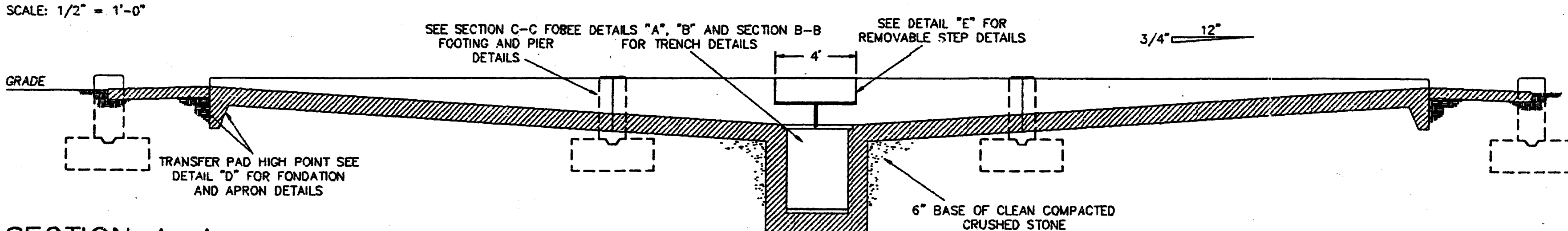
SCALE	BY	CHKD	APPROVED	OPERATIONS	DATE
1"=30'-0"	R.D.				08-13-92

SERVICE CENTER LOCATION	SC-DWG NUMBER	REV. NO.
SYRACUSE, N.Y.	7051-SP00-004	C



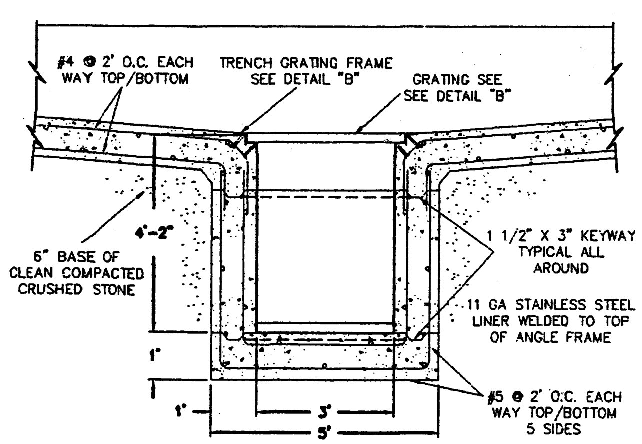
PLAN VIEW

SCALE: 1/2" = 1'-0"



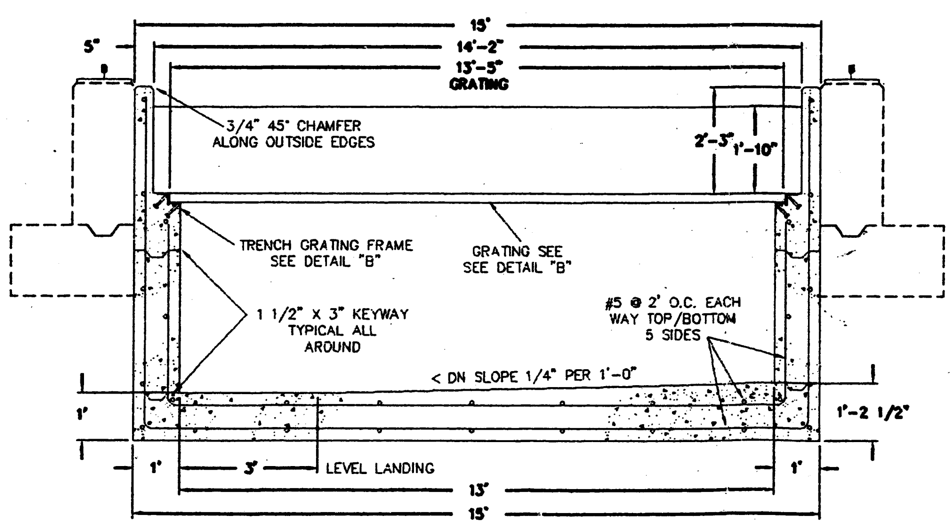
SECTION A-A

SCALE: 1/2" = 1'-0"



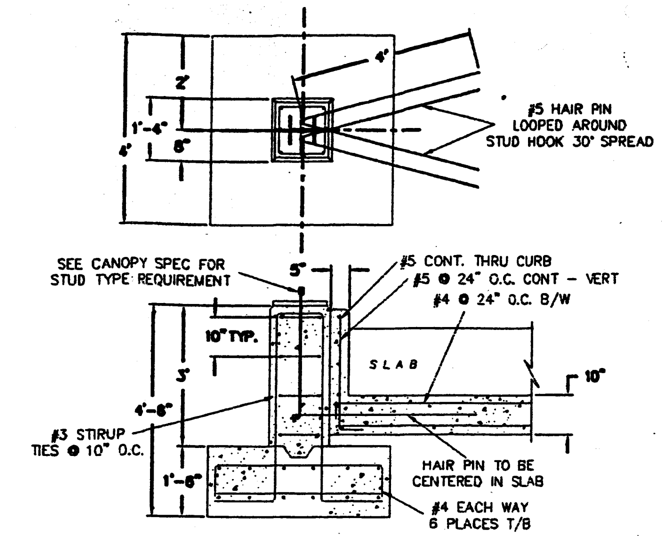
DETAIL "A" TRENCH CROSS SECTION

SCALE: 1/2" = 1'-0"



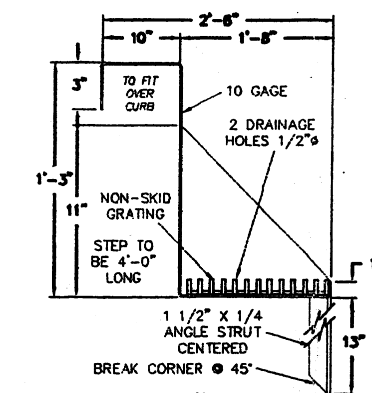
SECTION B-B

SCALE: 1/2" = 1'-0"



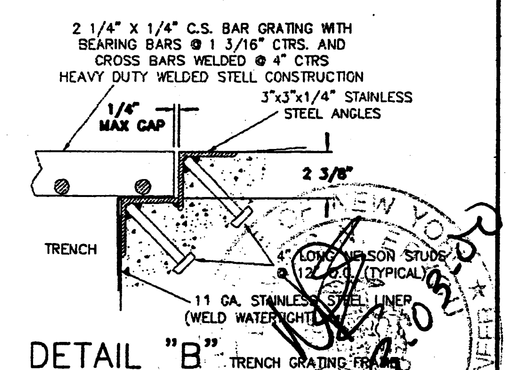
SECTION C-C CANOPY FOOTING AMD TRANSFER PAD

SCALE: 1/2" = 1'-0"



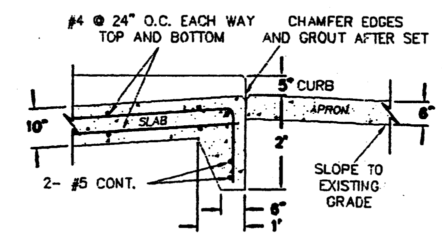
DETAIL "E" TRANSFER PAD STEP

SCALE: 1/2" = 1'-0"



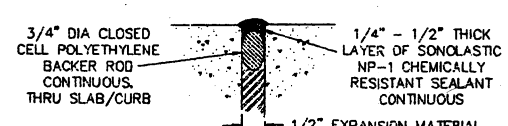
DETAIL "B"

NOT TO SCALE



DETAIL "C" SLAB HIGH POINT FOOTING

SCALE: 1/2" = 1'-0"



DETAIL "D" EXPANSION JOINT TREATMENT

NOT TO SCALE

PROPRIETARY STATEMENT

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GENERAL NOTES

CONTAINMENT VOLUME CALCULATION

TRENCH SUMP VOLUME –
L X W X H X 7.48 GAL/CU. FT
13' X 3' X 4.1' X 7.48 = 1197 GALLONS

TANKER PAD VOLUME –
(1/2)L X W X H X 7.48 GAL/CU. FT
(1/2)30' X 14.16' X 1.83' X 7.48 = 5828 GALLONS

TOTAL CONTAINMENT VOLUME –
1197 GAL + 5828 GAL = 7025 GALLONS

1. CONTAINMENT VOLUME CALCULATION DOES NOT INCLUDE ANY ALLOWANCE FOR RAINWATER VOLUME.
2. REFER TO DRAWING NO. AA06605B FOR CANOPY DESIGN & DETAILS.

NO.	DESCRIPTION	BY	CHK	APPR	DATE
B	UPDATED	NDE	NDE	–	030300
A	RELEASED FOR PART "B" PERMIT	RBG	NDE	–	030493

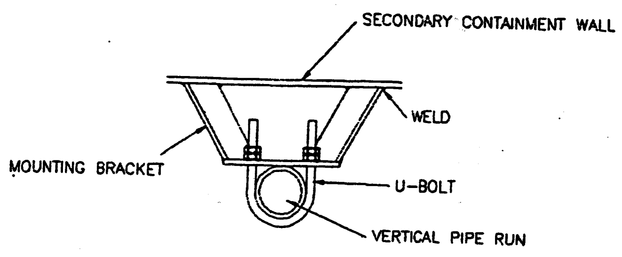
REVISIONS

TITLE
TRANSFER PAD PLAN, SECTIONS AND DETAILS

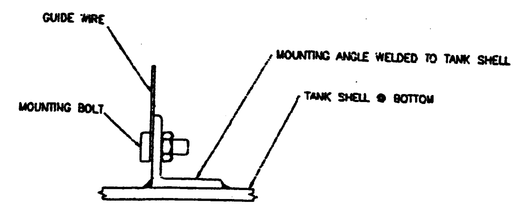
SAFETY-KLEEN CORP.
777 BIG TIMBER ROAD ELGIN, ILLINOIS 60123 PHONE 708-697-8460

SCALE	BY	CHKD	P.E. APPR	OP. APPR	DATE
AS NOTED	RBS	NDE			3/4/93

SERVICE CENTER LOCATION	SC-DWG-REV NO.	SHEET NO.
DEWITT, NY	AGPB503B	16



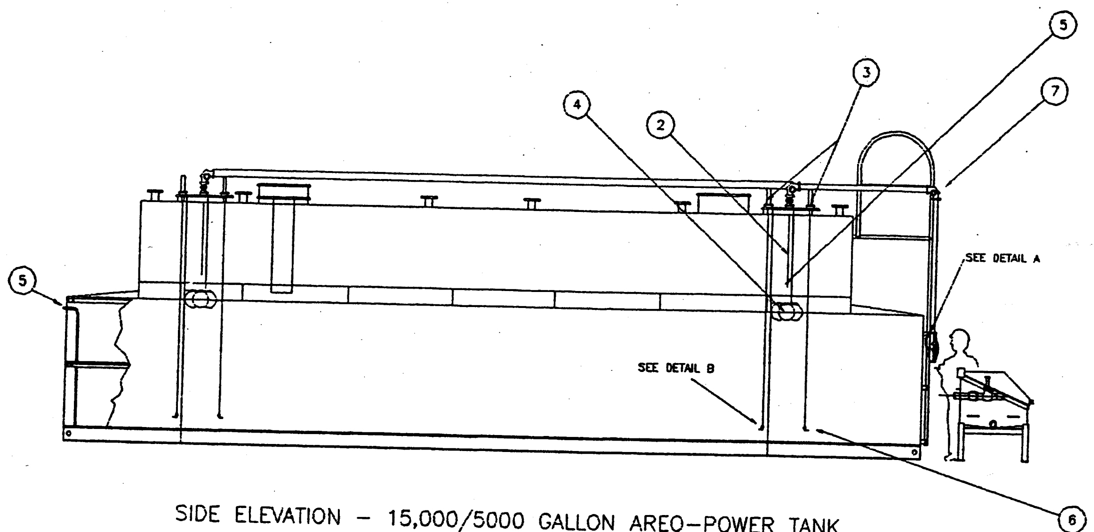
DETAIL A – VAREC PIPE MOUNT
INSTALLED BY AREO-POWER
-NTS-



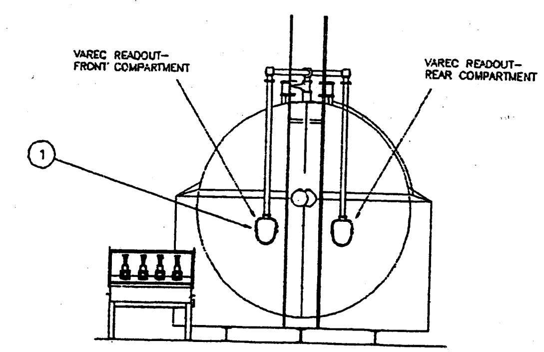
DETAIL B – VAREC CABLE MOUNT
INSTALLED BY AREO-POWER
-NTS-

EQUIPMENT SCHEDULE
VAREC AUTOMATIC
TANK GUAGE 2500
SERIES

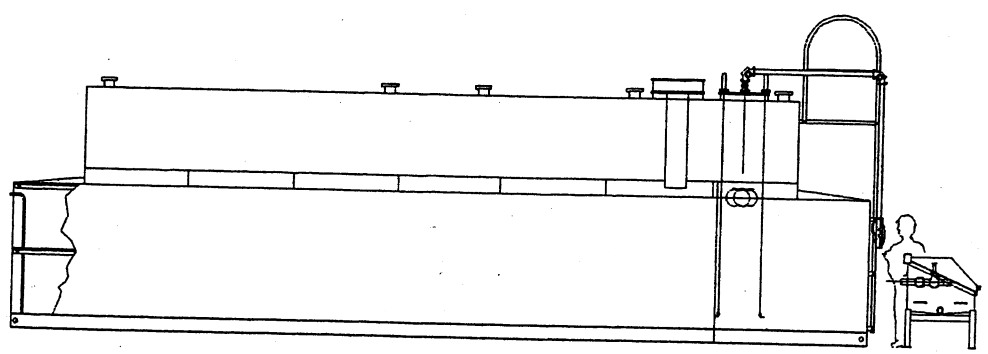
MARK	PART DESCRIPTION	REMARKS
1	GUAGE HEAD IRON HOUSING AND SHEAVES 304 S.S TRIM	
2	GUAGE TAPE 318 STAINLESS STEEL	
3	TOP GUIDE MRE ANCHOR, STEEL HOUSING AND SPRING ROD, CAD PLATE STEEL SPRING	
4	GUAGE FLOAT 316 S.S HOLLOW SHELL WELDED	
5	TAPE FASTENER 318 STAINLESS STEEL	
6	BOTTOM GUIDE MRE ANCHOR, STEEL	SEE DETAIL B
7	SHEAVE ELBOW IRON HOUSING, 316 S.S TRIM, TEFLON BEARING	
8	GUIDE WIRE 316 STAINLESS STEEL	



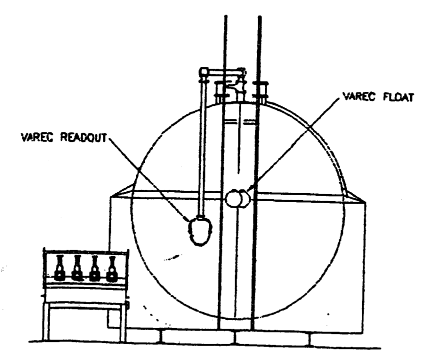
SIDE ELEVATION – 15,000/5000 GALLON AREO-POWER TANK
SEE DWG #APS 089 FOR ON SHEET 7 FOR DETAILS
-NTS-



END ELEVATION
-NTS-



SIDE ELEVATION – 20,000 GALLON AREO-POWER TANK
SEE DWG #APS 090 ON SHEET 6 FOR DETAILS
-NTS-



END ELEVATION
-NTS-

STATE OF NEW YORK
DENNIS N. EPP...
No. 06029...
NDE 03/03/00

GENERAL NOTES

1. ACTUAL INSTALATION CONFIGURATION MAY VARY DUE TO CONTRUCTION AND/OR MAINTENANCE/UPKEEP OF FACILITY.

PROPRIETARY STATEMENT

TITLE
TANKFAARM VAREC GAUGE INSTALLATION DETAILS

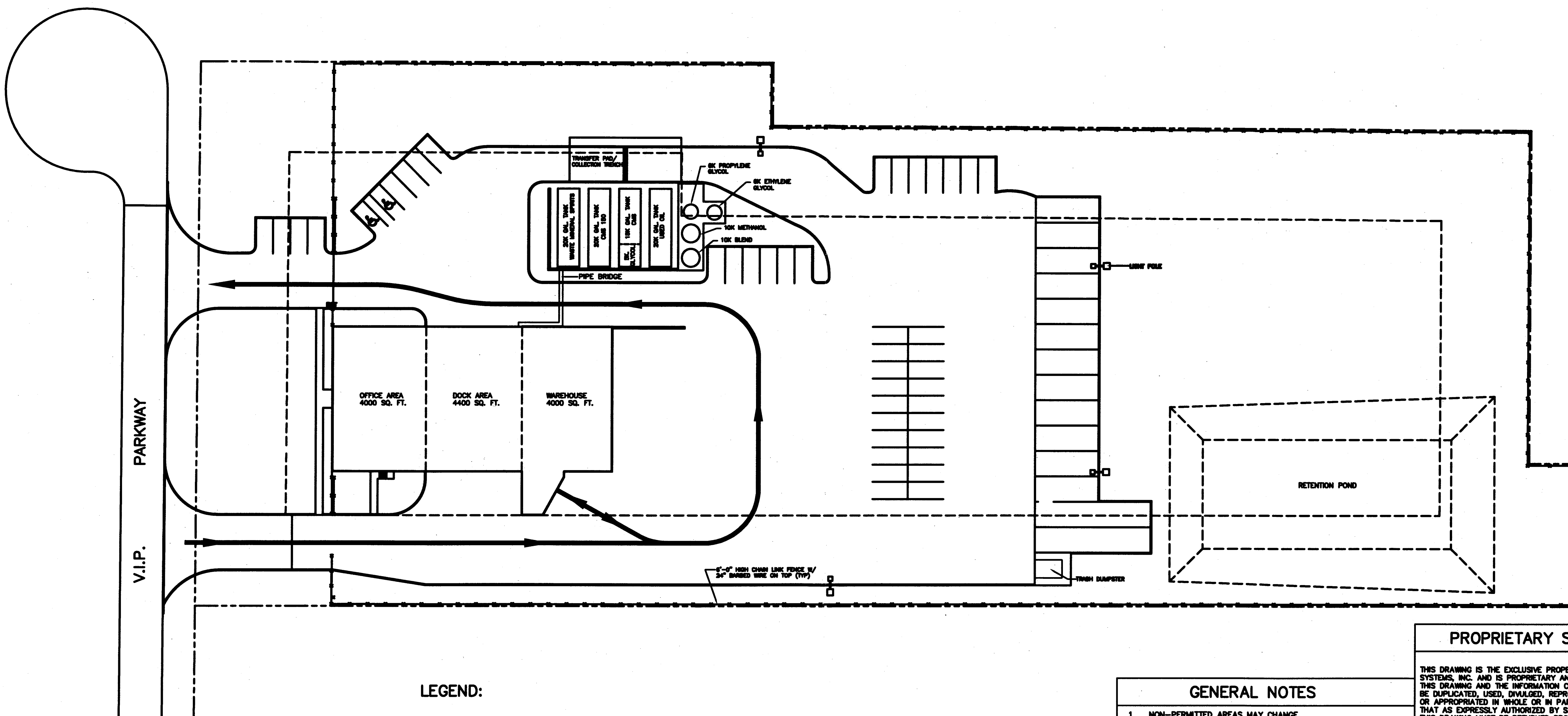
SAFETY-KLEEN CORP.
777 BIG TIMBER ROAD ELGIN, ILLINOIS 60123 PHONE 708-697-8460

SCALE	BY	CHKD	P.E. APPR	OP. APPR	DATE
1/4"=1'-0"	RS	KJM			8/13/92

SERVICE CENTER LOCATION	SC-DWG-REV NO.	SHEET NO.
DEWITT, NY	AGPB103A	10

NO.	DESCRIPTION	BY	CHK	APPR	DATE
B	UPDATED	NDE	NDE	-	030300
A	RELEASED FOR PART "B" PERMIT	CEW	KJM	-	081392

REVISIONS



LEGEND:

TRAFFIC FLOW

GENERAL NOTES

1. NON-PERMITTED AREAS MAY CHANGE.

PROPRIETARY STATEMENT

Project Solutions
Companies
1300 Boone Industrial Drive • Suite 200 • Columbia • MO 65202
• Phone: (573) 443-7100 • Fax: (573) 443-7181 •

NO.	DESCRIPTION	BY	CHK	APPR	DATE
C	REVISE TANK LAYOUT	JEK	MH	MH	042810
B	ADD W.V.F. TANKFARM	JEK	MH	MH	080708
A	RELEASED FOR PART "B" PERMIT	MDH	KJM	-	081792

REVISIONS

TITLE

HAZ. WASTE TRAFFIC PATTERN FOR WAREHOUSE

SAFETY-KLEEN SYSTEMS, INC.
5400 LEGACY DR. CLUSTER II BLDG. 3 PLANO, TX. 75024 800-669-5740

SCALE	BY	CHKD	APPROVED	OPPERATIONS	DATE
1"=30'-0"	R.D.				08-13-92

SERVICE CENTER LOCATION	SC-DWG NUMBER	REV. NO.
SYRACUSE, N.Y.	7051-SP00-005	C