Dave Drilling Environmental Engineering, Inc.
2283 Willow Avenue, Bay Point, CA 94565. Phone: (510) 258-5167 Website: www.ddfagala.com Email: fagala@outlook.com

DATE: ***JULY 17,*** 2015
FILE: RO0003163

Karel Detterman
Hazardous Materials Specialist
Environmental Health Services
Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
FAX: (510) 337 - 9335
Phone: (510) 567 - 6700

SUBJECT: ***PERJURY STATEMENT - REMEDIATION WORK AT ELEGANT CLEANERS #RO0003163, LOCATED AT 1208 LINCOLN AVENUE, ALAMEDA, CALIFORNIA 94501-2326***

I, Mr. Reza Sheikhai, the responsible party for the subject project, hereby, "declares , under penalty of perjury, that the information and/or recommendations contained in the attached document and/or report is true and correct to the best of my knowledge."

This letter is also signed by Dave Fagorala, the representative of the consulting firm (Dave Drilling Environmental Engineering, Inc.), that, I retained to implement the remediation work at the subject site.

If you have any questions regarding this letter, please call me at (510) 377 – 0233, or email me at: cpareza@aol.com

Sincerely,

Reza Sheikhai
Elegant Cleaners
1208 Lincoln Avenue
Alameda, CA 94501-2326

Dave A. Fagorala
Dave Drilling Environmental Engineering, Inc.
2283/2285 Willow Avenue, Bay Point, CA 94565

ATTACHMENTS

From: support <support@usan.org>
To: wasteit <wasteit@aol.com>
Subject: USAN 2015/08/14 #00000 0397243-000 NORM NEW
Date: Fri, Aug 14, 2015 6:50 pm

00000 USAN 08/14/15 18:47:45 0397243 NORMAL NOTICE

Message Number: 0397243
Received by USAN at 18:40 on 08/14/15 by BMD

Work Begins: 08/19/15 at
07:00 Notice: 020 hrs Priority: 2
Night Work: N Weekend Work:
Y

Expires: 09/11/15 at 23:59 Update By: 09/09/15 at 16:59

Caller:
DAVE FAGROALA
Company: D.D.E.E.

Address: 2283 WILLOW AVE
City:
PITTSBURG State: CA Zip: 94565
Business Tel: 510-258-5167
Fax:
Email Address: WASTEIT@AOL.COM

Nature of Work: VERTICAL BORING ,DRILL FOR MNTR WELL
Done for:
ELIGANT PAINTERS Explosives: N
Foreman: CALLER

Field Tel: Cell Tel: 510-258-5167

Area Premarked: Y Premark Method: WHITE PAINT

Permit Type: COUNTY Number: UNK

Vac / Pwr Equip Use In The Approx Location Of Member Facilities Requested:
N
Excavation Enters Into Street Or Sidewalk Area: Y

Location:
Street
Address: 1208 LINCOLN AVE
Cross Street: BAY ST

WRK IN
FRT,BK, & E/SI/O ADDR

Place: ALAMEDA County: ALAMEDA
State: CA

Long/Lat Long: -122.264583 Lat: 37.774134 Long: -122.263791 Lat:
37.774782

Sent to:
CTYALA = CITY ALAMEDA CTYOAK = CITY
OAKLAND CONST DEPT
COMHAY = COMCAST-HAYWARD COMOAK =

COMCAST-OAKLAND
EBWCMS = EAST BAY WATER MPOWER =
MPOWER COMMUNICATIONS
PACBEL = PACIFIC BELL PGEOAK =
PGE DISTR OAKLAND

Member Contact Information

Member Utility	Main Contact #	Vacuum Contact #	Emergency #	After hours #
CITY ALAMEDA	(510)748-3943	(510)715-6111	(510)748-3966	(510)715-6111
CITY OAKLAND C	(510)238-6348	(510)238-7288		(510)772-8134
COMCAST-HAYWAR	(510)887-1300			(888)824-8399
COMCAST-OAKLAN	(510)887-1300	(888)824-8399		(888)824-8219
EAST BAY WATER	(510)287-0600			(510)287-0600
MPOWER COMMUNI	(916)903-6028			(877)370-4482
PACIFIC BELL	(510)645-2929	(510)645-2929		(510)645-2929
PGE DISTR OAKL	(800)743-5000x00	(800)743-5000	(800)743-5000	(800)743-5000

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ATTACHMENT 1

ACCIDENT PREVENTION PROGRAM: REPORTING, INVESTIGATION, AND REVIEW RESPONSIBILITY MATRIX

Action	*Responsible Party*					
	Employee	**Supervisor**	**Project/ Location Manager**	**Health and Safety Representative**	**Business Line Health and Safety Representative**	**Vice President, Health and Safety**
ssue, Revise, and Maintain Procedure						X
Report All Incidents to Supervisor	X					
Notify Health and Safety Representative		X				
Arrange Medical Care		X		X		
Notify Health Resources of ncident		X		X		
nitiate/Complete Company Forms		X				
Complete Investigation of ncident		X	X	X		
Conduct Accident Review Board		X	X	X		
Report Injury/Accident to nsurance Company				X	X	
Complete Monthly Loss Report					X	

ATTACTHMENT 2
SUPERVISOR'S EMPLOYEE INJURY REPORT

EMPLOYEE

This report is to be initiated by the employee's supervisor. Please answer all questions completely. This report must be forwarded to the appropriate Health and Safety Representative within 24 HOURS of injury/illness.

Injured's Name _____ Sex _____ S.S No. _____ Birth Date _____
Home Address _____
City _____ State _____ Zip _____ Phone ___(___)_____
Job Title _____ Hire Date _____ Hourly Wage_____

SUPERVISOR

Date of Incident _____ Time _____ Time Reported _____ To Whom? _____
Project/Location Name_____ Address_____
Project No. _____ Time Shift Began _____Did the Employee Leave work? ☐No ☐Yes When _____
Has employee returned to work ☐No ☐Yes When _____ Did employee miss a regularly scheduled shift? No ☐Yes ☐
Doctor/Hospital name _____ Address _____
Witness Name(s) _____Statement Attached ? ☐No ☐ Yes
Nature of Injury _____ Exact Body Part _____
Medical Attention: ☐None ☐ First Aid On Site ☐octor's Office ☐ospital ER ☐ospitalized
Job Assignment at Time of Incident _____
Describe Incident: _____

What unsafe condition and/or act contributed to the Incident? _____

What Corrective Action has been taken to prevent Recurrence? _____

Supervisor: _____ _____ _____
(Print Name) (Signature) (Date)

MANAGER

Comments on Incident and Corrective Action _____

Project/Location Mgr.: _____ _____ _____
(Print Name) (Signature) (Date)

HEALTH AND SAFETY

Concur with Action Taken ☐No ☐Yes Remarks _____

OSHA Classification:
☐ First Aid ☐ Recordable, No Lost/Restricted Workdays ☐Recordable, Restricted Activity ☐atality
Days away from Work _____ _____ Days Restricted Work _____

All injuries/illnesses requiring outside medical treatment must be reported to Ins Company by calling 510-258-5167 within 24 hours of the incident.

Worker's Compensation Claim Number (if applicable) _____

Health and Safety Representative:

_____ _____ _____
(Print Name) (Signature) (Date)

ATTACHMENT 3
VEHICLE ACCIDENT REPORT

This report is to be initiated by the employee involved in the accident or his/her direct supervisor. Please answer all questions completely. This report must be forwarded to the appropriate health and safety representative with in 24 HOURS of the accident/

ACCIDENT DESCRIPTION

ACCIDENT DATE _____ TIME _____ ☐ A.M or ☐ P.M.
LOCATION OF ACCICENT (CITY, STATE) _____
DESRIPTION OF ACCIDENT _____
_____
_____
WITNESS _____ PHONE NO. _____
ADDRESS _____ CITY _____ STATE _____ ZIP _____
POLICE OFFICER'S NAME _____ DEPARTMENT _____

COMPANY VEHICLE

DRIVER _____ DRIVERS LICENSE NO. _____ STATE _____
ADDRESS _____ CITY _____ STATE _____ ZIP _____
WORK PHONE NO. _(___)_____ S.S NO. _____ PROJECT NAME/NO _____
VEHICLE NO. _____ YEAR _____ MAKE _____ MODEL _____ LICENSE PLATE NO. _____
STATE _____ VEHICLE OWNER: ☐ COMPANY ☐ LEASED/RENTED ☐ PRIVATE VEHICLE

VEHICLE TYPE: ☐ COMMERCIAL MOTOR VEHICLE ☐ NON-COMMERCIAL

IF NOT COMPANY-OWNED: OWNER _____ PHONE NO _(____)_____
ADDRESS _____ CITY _____ STATE _____ ZIP _____
VEHICLE DAMAGE _____
NO. OF VEHICLES TOWED FROM SCENE _____ NUMBER OF INJURIES _____ NUMBER OF FATALITIES _____
WERE HAZARDOUS MATERIALS RELEASED? ☐ NO ☐ YES IF YES, DESCRIBE MATERIALS _____
_____

OTHER VEHICLE

DRIVER _____ DRIVERS LICENSE NO. _____ STATE _____
ADDRESS _____ CITY _____ STATE _____ ZIP _____
WORK PHONE NO. _(___)_____ S.S NO. _____

OWNER'S NAME (☐ CHECK IF SAME AS DRIVER) _____
ADDRESS _____ CITY _____ STATE _____ ZIP _____
INSURANCE COMPANY _____ POLICY NO. _____
AGENT'S NAME _____ PHONE NO. _(___)_____
ADDRESS _____ CITY _____ STATE _____ ZIP _____
VEHICLE YEAR _____ MAKE _____ MODEL _____ PLATE NO. _____ STATE _____
VEHICLES I.D. NO. _____
VEHICLE DAMAGE _____

PASSENGERS: ☐ NO ☐ YES INJURIES: ☐ NO ☐ YES (If Yes, list names and telephone numbers below)

_____
_____
_____

VEHICLE ACCIDENT REPORT

WEATHER: ☐ Clear ☐ Cloudy ☐ Fog ☐ Rain ☐ Sleet Snow Other_____

PAVEMENT: ☐ Asphal ☐ Stee ☐ Concrete ☐ Woo ☐ Gravel/Dirt
☐ Brick/Stone Other _____

CONDITION: ☐ Dry ☐ Wet ☐ Icy ☐ Pot Holes Other_____

TRAFFIC CONTROL: Traffic Light Stop Sign Railroad No Intersection No Control

ROADWAY: Number of Lanes Each Direction _____ ☐ Residential ☐ Divided Highway
☐ Undivided Highway

Draw and name roadways showing each vehicle, direction of travel, and point of impact. Indicate travel before the accident with a solid line, and post-accident movement with a broken line.

SYMBOLS:
Your Vehicle

Other Vehicle(s)

Pedestrian

Stop Sign

Yield

Railroad

ADDITIONAL INFORMATION:

_____

_____

_____

All vehicle accidents involving third party individuals or property, with the exception of accidents involving only company-rented Hertz automobiles, must be reported to Ins. Company by calling 510-258-5167 within 24 hours of the accident.

WAS VEHICLE ACCIDENT REPORTED TO CSSC? ☐ YES ☐ NO CLAIM NUMBER _____

EMPLOYEE _____ (Print) _____ (Signature) _____ (Date)

SUPERVISOR _____ (Print) _____ (Signature) _____ (Date)

HEALTH & SAFETY REP. _____ (Print) _____ (Signature) _____ (Date)

REPORT MUST BE CALLED IN OR FAXED TO:
(PHONE: 510-258-5167, FAX 510-352-5531)
WITHIN 24 HOURS, OR NOT LATER THAN NEST BUSNESS DAY

ATTACHMENT 4

GENERAL LIABILITY, PROPERTY DAMAGE, AND LOSS REPORT

This report is to be completed for all losses or damage to company property in excess of 1$,000.00 and all third party damage, regardless of value, resulting from company activities.

PROJECT/LOCATION _____ PROJECT NO. ____ DATE _____
ADDRESS _____
HOW DID DAMAGE OR LOSS OCCUR: _____
_____
DESCRIPTION AND VALUE ($) OF DAMAGED/LOST/STOLEN/ PROPERTY: _____
_____
LOCATION OF DAMAGED/LOST/SOLEN PROPERTY (Before Loss): _____
_____
DATE AND TIME OF DAMAGE, LOSS, OR THEFT: Date: _____ Time _____a.m/p.m
OWNER OF DAMAGED/LOST/STOLEN PROPERTY:
Name _____ Phone No.__(___)_____
Address_____ City _____
Employer and Address _____
Description of Injury _____

WITNESSES:

1. Name _____ Phone No. _(___)_____
   Address_____ City _____
   Employer and Address _____

2. Name _____ Phone No. _(___)_____
   Address_____ City _____
   Employer and Address _____

WERE PICTURES TAKEN? ☐ YES ☐ NO
WERE POLICE NOTIFIED ☐ YES ☐ NO

COMPLETED BY:

_____ _____ _____
(Print) (Signature) (Date)

PROJECT MANAGER:

_____ _____ _____
(Print) (Signature) (Date)

REPORT MUST BE CALLED IN OR FAXED TO:
(PHONE: 510-258-5167, FAX 510-352-5531)
WITHIN 24 HOURS, OR NOT LATER THAN NEST BUSNESS DAY

ATTACHMENT 5
INCIDENT INVESTIGATION REPORT

*** MUST BE COMPLETED WITHIN 72 HOURS ***

Investigation Date _____ Date of Incident _____

Employee Name _____

Supervisor Name _____

Project Number/Name _____

Location of Incident _____

- Incident Classification
  Injury ☐ First Aid ☐ OSHA Recordable ☐ Lost Workday ☐ Restricted Workday
  Vehicle ☐ Chargeable ☐ Non-Chargeable
  DOT ☐ DOT Vehicle ☐ DOT Reportable
  Near Miss ☐
  General Liability ☐
- Description (Provide facts, describe how incident occurred, provide diagram [on back] or photos)
  _____
  _____
- Analysis 1 (What unsafe acts or conditions contributed to the incident?)
  _____
  _____
- Analysis 2 (What systematic or management deficiencies contributed to the incident?)
  _____
  _____
- Corrective Action(s) (List corrective action items, responsible person, scheduled completion date)
  _____
  _____
- Witnesses (Attach statements or indicate why unavailable)
  _____
  _____

Investigated By _____ (Print) _____ (Signature) _____ (Date)

Project/Location Mgr. _____ (Print) _____ (Signature) _____ (Date)

(Attach Additional Pages if Needed)

ATTACHMENT 6

ACCIDENT REVIEW BOARD

DATE: LOCATION:	
BOARD MEMBERS:	
ACCIDENT DATE:	EMPLOYEE(S) INVOLVED IN INCIDENT:
INVESTIGATION COMPLETE:	ACCIDENT CLASSIFICATION:

THE FOLLOWING INFORMATION MUST BE PROVIDED BY THE REVIEW BOARD FOR THIS INCIDENT (PRINT):

SUPERVISOR: _____ **PROJECT/LOCATION MGR.** _____

CAUSE OF ACCIDENT:

ACTION BY BOARD

*ALL ACTIONS BY THE ACCIDENT REVIEW BOARD ARE SUBJECT TO FINAL REVIEW BY THE HUMAN RESOURCES AND LEGAL DEPARTMENTS

ACCEPTED:

_____ (Employee Signature)

_____ (Supervisor Signature)

APPROVED

_____ (Project/Location Manager)

REJECTED FOR:

_____

_____

APPROVED

_____ (Business Line Health and Safety Manager or Designee)

REJECTED FOR:

_____

_____

APPROVED

_____ (Business Line Vice President)

REJECTED FOR:

_____

_____

ATTACHMENT 7

INJURY/ILLNESS CLASSIFICATIONS GUIDELINES

Medical Treatment – The following are generally considered medical treatment. Work-related injuries for which this type of treatment was provided or should have been provided are almost always recordable.

- Treatment of **INFECTION;**
- Application of **ANTISEPTICS during second or subsequent visit** to medical facility;
- Treatment of **SECOND OR THIRD DEGREE BURN(S);**
- Application of **BUTTERFLY ADHESIVE DRESSING(S) or STERI STRIP(S)** in lieu of sutures;
- Removal of **FOREIGN BODIES EMBEDDED IN EYE;**
- Removal of **FOREIGN BODIES FROM WOUND**; if procedure is **COMPLICATED** because of depth of embedment, size, or location;
- Use of **PRESCRIPTION MEDICATIONS** (except a single dose administered on first visit for minor injury or discomfort);
- Use of hot or cold **SOAKING THERAPY during second or subsequent visit** to medical facility;
- Application of hot or cold **COMPRESS(ES) during second or subsequent visit** to medical facility;
- **CUTTING AWAY DEAD DKIN** (surgical debridement);
- Use of **WHIRLPOOL BATH THERAPY during second or subsequent visit to** medical facility;
- **POSITIVE X-RAY DIAGNOSIS** (fractures, broken bones, etc.); and
- **ADMISSION TO A HOSPITAL** or equivalent medical facility **FOR TREATMENT**

First Aid Treatment – The following are generally considered first aid treatment (i.e., one-time treatment and subsequent of minor injuries) and should not be recorded if the work-related injury does not involve loss of consciousness, restriction of work or motion, or transfer to another job:

- Application of **ANTISEPTICS during first visit to** medical facility;
- Treatment of **FIRST DEGREE BURN(S);**
- Application of **BANDAGE(S)** during any visit to medical facility;
- Use of **ELASTIC BANDAGE(S) during first visit** to medical facility;
- Removal of **FOREIGN BODIES NTO EMBEDDED IN EYE** if only irrigation is required;

- Removal of **FOREIGN BODIES FROM WOUND**; is procedure is **UNCOMPLICATED**, and is, for example, removed by tweezers or other simple technique;
- Use of **NON-PRESCRIPTION MEDICATIONS AND** administration of **single doses of PRESCRIPTION MEDICATION** on first visit for minor injury or discomfort;
- **SOAKING THERAPY on initial visit** to medical facility or removal of bandages by **SOAKING;**
- Application of hot or cold **COMPRESS(S) during first visit** to medical facility;
- Application of **OINTMENTS** to abrasions to prevent drying or cracking;
- Use of **WHIRLPOOL BATH THERAPY during first visit** to medical facility;
- **NEGATIVE X-RAY DIAGNOSIS**; and
- **OBSERVATION** of injury during visit to medical facility.

The following procedure, by itself, is not considered medical treatment:

- Administration of TETANUS SHOT(S) or BOOSTER(S). However, these shots are often given in conjunction with more serious injuries; consequently, injury requiring these shot may be recordable for other reasons.

Loss of Consciousness – If an employee loses consciousness as the result of a work-related injury/illness, the case must be recorded no matter what type of treatment was provided. The rationale behind this recording requirement is that loss of consciousness is generally associated with more serious injuries.

Restriction of Work or Motion – Restricted work activity occurs when the employee, because of the impact of a job-related injury, is physically or mentally unable to perform all or any part of his or her normal assignment during all or any part of the work day shift. The emphasis is on the employee's ability to perform normal duties. Restriction of work or motion may result in either a lost worktime injury or a non-lost worktime injury, depending upon whether the restriction extended beyond the day of injury.

Transfer to Another Job – Injuries requiring transfer of the employee to another job are also considered serious enough to be recordable regardless of the type pf treatment provided. Transfers are seldom the sole criterion for recordability because injury cases are almost always recordable on other grounds, primarily medical treatment or restriction of work or motion.

ATTACHMENT 8
MEDICAL FORMS

AUTHORIZATION FOR TREATMENT OF OCCUPATIONAL INJURY/ILLNESS

Employee Name: _____
Social Security #: _____ Injury: ☐ Illness: ☐
Job Title: _____ Incident Date: _____
Project/Location _____ Location of Accident/Exposure:
Telephone #: _____ _____
H&S Representative: _____
Body Part(s) Injured: _____
Describe in detail hot incident occurred: _____
_____

TO TREATING PHYSICIAN:

In the case of occupational injury/illness, please examine the employee and render necessary conservative treatment directly related to the occupational injury/illness.

Light Duty Work

It is the policy of our company to provide work assignments, whenever possible, for employees with physical activity restrictions resulting from an occupational injury/illness. If the employee will be subject to a restriction, please contact **Health Resources** before the employee leaves your office, but not later than the close of business on the day of initial treatment.

Telephone: 510-258-5167 Fax (510) 352-5531

Please Send Reports To: WIT, Inc.

DOCTOR, Please Provide

Medical Diagnosis: _____
Treatment Provided: _____
_____
Recommended Work Limitation/Restriction:
_____
Return Visit Needed: ☐ No ☐ Yes Date if Yes _____ First Aid Only ☐
Physician Name: _____ Physician Telephone: _____
Physician Signature: _____ Date: _____

YOU MUST CALL HEALTH RESOURCES FOR ALL OCCUPATIONAL INHURIES/ILLNESSES REQUIRING OUTSIDE MEDICAL TREATMENT 510-258-5167.
FAX COMPLETED FORM TO HEALTH RESOURCES (510) 352-5531

ATTACHMENT 8B
MEDICAL FORMS

AUTHORIZATION FOR RELEASE OF MEDICAL INFORMATION

I, _____ grant authorization to _____
(Print Full Name) (Treating Physician's Name)
for the release of any information concerning my occupational injury/illness to: WIT, Inc.

for the purpose of disability follow-up and return to work authorization.

Please provide the following information:

EMPLOYEE INFORMATION:
Full Name: _____
Date of Birth: _____

Social Security #: _____
Home Address: _____

Home Phone: _____
Work Phone: _____

MEDICAL INFORMATION
Treating Physician's Name: _____
Physician's Address: _____

Phone Number: _____
Fax Number: _____

Employee Signature: _____ Date: _____

ATTACHMENT 8C
MEDICAL FORMS

RETURN-TO-WORK EXAMINATION FORM

Exam Date: ____ / ____ / ____ Employee Name: _____

Birth Date: ____ / ____ / ____ Social Security #: ____ - ____ - ____

Job Title: _____ Sex: Male Female

Examining Provider: Please complete this form and fax to the WIT, Inc. at (510) 258-5167. Please contact WIT to report status of employee post-treatment.

DIAGNOSIS: _____

TREATMENT PLAN: _____

MEDICATIONS: _____

PHYSICAL THERAPY: _____

OTHER:

May return to full duty work effective ____ / ____ / ____
May return to limited duty from ____ / ____ / ____ to ____ / ____ / ____
Unable to return to work from ____ / ____ / ____ to ____ / ____ / ____

WORK LIMITATIONS:

Restricted lifting/pushing/pulling: maximum weight in lbs: ____ (company limits all lifting to 60 lbs).
Work only with right/left hand. Restricted repetitive motion right/left hand
Sitting Job only. Restricted operation of moving equipment.
Other. _____

FOLLOW-UP PLAN;

Release from care.
Schedule for follow-up appointment on ____ / ____ / ____
Time _____ AM/PM
Referral to _____
Appointment date ____ / ____ / ____ Time ____ AM/PM

Comments: _____

_____ _____ _____

Examiner's Name (print) Examiner's Signature Date

APPENDIX A

LIST OF PROPOSITION 65 CHEMICALS OF CONCERN

STATE OF CALIFORNIA
ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF ENVIRONMENTAL HEALTH HAZARD ASSESSMENT
SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986

CHEMICALS KNOWN TO THE STATE TO CAUSE CANCER OR REPRODUCTIVE TOXICITY
NOVEMBER 2, 2012

The Safe Drinking Water and Toxic Enforcement Act of 1986 requires that the Governor revise and republish at least once per year the list of chemicals known to the State to cause cancer or reproductive toxicity. The identification number indicated in the following list is the Chemical Abstracts Service (CAS) Registry Number. No CAS number is given when several substances are presented as a single listing. The date refers to the initial appearance of the chemical on the list. For easy reference, chemicals which are shown underlined are newly added. Chemicals or endpoints shown in strikeout were placed on the Proposition 65 list on the date noted, and have subsequently been removed.

Chemical	Type of Toxicity	CAS No.	Date Listed
A-alpha-C (2-Amino-9H-pyrido [2,3-b]indole)	cancer	26148-68-5	January 1, 1990
Acetaldehyde	cancer	75-07-0	April 1, 1988
Acetamide	cancer	60-35-5	January 1, 1990
Acetazolamide	developmental	59-66-5	August 20, 1999
Acetochlor	cancer	34256-82-1	January 1, 1989
Acetohydroxamic acid	developmental	546-88-3	April 1, 1990
2-Acetylaminofluorene	cancer	53-96-3	July 1, 1987
Acifluorfen sodium	cancer	62476-59-9	January 1, 1990
Acrylamide	cancer	79-06-1	January 1, 1990
Acrylamide	developmental, male	79-06-1	February 25, 2011
Acrylonitrile	cancer	107-13-1	July 1, 1987
Actinomycin D	cancer developmental	50-76-0	October 1, 1989 October 1, 1992
AF-2;[2-(2-furyl)-3-(5-nitro-2-furyl)] acrylamide	cancer	3688-53-7	July 1, 1987
Aflatoxins	cancer	---	January 1, 1988
Alachlor	cancer	15972-60-8	January 1, 1989
Alcoholic beverages, when associated with alcohol abuse	cancer	---	July 1, 1988
Aldrin	cancer	309-00-2	July 1, 1988
All-trans retinoic acid	developmental	302-79-4	January 1, 1989
~~Allyl chloride~~ Delisted October 29, 1999	~~cancer~~	~~107-05-1~~	~~January 1, 1990~~
Alprazolam	developmental	28981-97-7	July 1, 1990
Altretamine	developmental, male	645-05-6	August 20, 1999
Amantadine hydrochloride	developmental	665-66-7	February 27, 2001
Amikacin sulfate	developmental	39831-55-5	July 1, 1990
2-Aminoanthraquinone	cancer	117-79-3	October 1, 1989
p-Aminoazobenzene	cancer	60-09-3	January 1, 1990
o-Aminoazotoluene	cancer	97-56-3	July 1, 1987

4-Aminobiphenyl (4-amino-diphenyl)	cancer	92-67-1	February 27, 1987
1-Amino-2,4-dibromo-anthraquinone	cancer	81-49-2	August 26, 1997
3-Amino-9-ethylcarbazole hydrochloride	cancer	6109-97-3	July 1, 1989
2-Aminofluorene	cancer	153-78-6	January 29, 1999
Aminoglutethimide	developmental	125-84-8	July 1, 1990
Aminoglycosides	developmental	---	October 1, 1992
1-Amino-2-methylanthraquinone	cancer	82-28-0	October 1, 1989
2-Amino-5-(5-nitro-2-furyl)-1,3,4-thiadiazole	cancer	712-68-5	July 1, 1987
4-Amino-2-nitrophenol	cancer	119-34-6	January 29, 1999
Aminopterin	developmental, female	54-62-6	July 1, 1987
Amiodarone hydrochloride	developmental, female, male	19774-82-4	August 26, 1997
Amitraz	developmental	33089-61-1	March 30, 1999
Amitrole	cancer	61-82-5	July 1, 1987
Amoxapine	developmental	14028-44-5	May 15, 1998
Amsacrine	cancer	51264-14-3	August 7, 2009
tert-Amyl methyl ether	developmental	994-05-8	December 18, 2009
Anabolic steroids	female, male	---	April 1, 1990
Analgesic mixtures containing phenacetin	cancer	---	February 27, 1987
Androstenedione	cancer	27208-37-3	May 3, 2011
Angiotensin converting enzyme (ACE) inhibitors	developmental	---	October 1, 1992
Aniline	cancer	62-53-3	January 1, 1990
Aniline hydrochloride	cancer	142-04-1	May 15, 1998
o-Anisidine	cancer	90-04-0	July 1, 1987
o-Anisidine hydrochloride	cancer	134-29-2	July 1, 1987
Anisindione	developmental	117-37-3	October 1, 1992
Anthraquinone	cancer	84-65-1	September 28, 2007
Antimony oxide (Antimony trioxide)	cancer	1309-64-4	October 1, 1990
Aramite	cancer	140-57-8	July 1, 1987
Areca nut	cancer	---	February 3, 2006
Aristolochic acids	cancer	---	July 9, 2004
Arsenic (inorganic arsenic compounds)	cancer	--	February 27, 1987
Arsenic (inorganic oxides)	developmental	---	May 1, 1997
Asbestos	cancer	1332-21-4	February 27, 1987
Aspirin (NOTE: It is especially important not to use aspirin during the last three months of pregnancy, unless specifically directed to do so by a physician because it may cause problems in the unborn child or complications during delivery.)	developmental, female	50-78-2	July 1, 1990
Atenolol	developmental	29122-68-7	August 26, 1997
Auramine	cancer	492-80-8	July 1, 1987
Auranofin	developmental	34031-32-8	January 29, 1999
Avermectin B1 (Abamectin)	developmental	71751-41-2	December 3, 2010

Azacitidine	cancer	320-67-2	January 1, 1992
Azaserine	cancer	115-02-6	July 1, 1987
Azathioprine	cancer	446-86-6	February 27, 1987
Azathioprine	developmental	446-86-6	September 1, 1996
Azobenzene	cancer	103-33-3	January 1, 1990
Barbiturates	developmental	---	October 1, 1992
Beclomethasone dipropionate	developmental	5534-09-8	May 15, 1998
Benomyl	developmental, male	17804-35-2	July 1, 1991
Benthiavalicarb-isopropyl	cancer	177406-68-7	July 1, 2008
Benz[a]anthracene	cancer	56-55-3	July 1, 1987
Benzene	cancer	71-43-2	February 27, 1987
Benzene	developmental, male	71-43-2	December 26, 1997
Benzidine [and its salts]	cancer	92-87-5	February 27, 1987
Benzidine-based dyes	cancer	---	October 1, 1992
Benzodiazepines	developmental	---	October 1, 1992
Benzo[b]fluoranthene	cancer	205-99-2	July 1, 1987
Benzo[j]fluoranthene	cancer	205-82-3	July 1, 1987
Benzo[k]fluoranthene	cancer	207-08-9	July 1, 1987
Benzofuran	cancer	271-89-6	October 1, 1990
Benzophenone	cancer	119-61-9	June 22, 2012
Benzo[a]pyrene	cancer	50-32-8	July 1, 1987
Benzotrichloride	cancer	98-07-7	July 1, 1987
Benzphetamine hydrochloride	developmental	5411-22-3	April 1, 1990
Benzyl chloride	cancer	100-44-7	January 1, 1990
Benzyl violet 4B	cancer	1694-09-3	July 1, 1987
Beryllium and beryllium compounds	cancer	---	October 1, 1987
Betel quid with tobacco	cancer	---	January 1, 1990
Betel quid without tobacco	cancer	---	February 3, 2006
2,2-Bis(bromomethyl)-1,3-propanediol	cancer	3296-90-0	May 1, 1996
Bis(2-chloroethyl)ether	cancer	111-44-4	April 1, 1988
N,N-Bis(2-chloroethyl)-2-naphthylamine (Chlornapazine)	cancer	494-03-1	February 27, 1987
Bischloroethyl nitrosourea (BCNU) (Carmustine)	cancer	154-93-8	July 1, 1987
Bischloroethyl nitrosourea (BCNU) (Carmustine)	developmental	154-93-8	July 1, 1990
Bis(chloromethyl)ether	cancer	542-88-1	February 27, 1987
Bis(2-chloro-1-methylethyl)ether, technical grade	cancer	---	October 29, 1999
Bitumens, extracts of steam-refined and air refined	cancer	---	January 1, 1990
Bracken fern	cancer	---	January 1, 1990
Bromacil lithium salt	developmental	53404-19-6	May 18, 1999
Bromacil lithium salt	male	53404-19-6	January 17, 2003
Bromate	cancer	15541-45-4	May 31, 2002
Bromochloroacetic acid	cancer	5589-96-8	April 6, 2010
Bromodichloromethane	cancer	75-27-4	January 1, 1990
Bromoethane	cancer	74-96-4	December 22, 2000
Bromoform	cancer	75-25-2	April 1, 1991

1-Bromopropane (1-BP)	developmental, female, male	106-94-5	December 7, 2004
2-Bromopropane (2-BP)	female, male	75-26-3	May 31, 2005
Bromoxynil	developmental	1689-84-5	October 1, 1990
Bromoxynil octanoate	developmental	1689-99-2	May 18, 1999
Butabarbital sodium	developmental	143-81-7	October 1, 1992
1,3-Butadiene	cancer	106-99-0	April 1, 1988
1,3-Butadiene	developmental, female, male	106-99-0	April 16, 2004
1,4-Butanediol dimethanesulfonate (Busulfan)	cancer	55-98-1	February 27, 1987
1,4-Butanediol dimethanesulfonate (Busulfan)	developmental	55-98-1	January 1, 1989
Butylated hydroxyanisole	cancer	25013-16-5	January 1, 1990
Butyl benzyl phthalate (BBP)	developmental	85-68-7	December 2, 2005
n-Butyl glycidyl ether	male	2426-08-6	August 7, 2009
beta-Butyrolactone	cancer	3068-88-0	July 1, 1987
Cacodylic acid	cancer	75-60-5	May 1, 1996
Cadmium	developmental, male	---	May 1, 1997
Cadmium and cadmium compounds	cancer	---	October 1, 1987
Caffeic acid	cancer	331-39-5	October 1, 1994
Captafol	cancer	2425-06-1	October 1, 1988
Captan	cancer	133-06-2	January 1, 1990
Carbamazepine	developmental	298-46-4	January 29, 1999
Carbaryl	cancer	63-25-2	February 5, 2010
Carbaryl	developmental, male	63-25-2	August 7, 2009
Carbazole	cancer	86-74-8	May 1, 1996
Carbon black (airborne, unbound particles of respirable size)	cancer	1333-86-4	February 21, 2003
Carbon disulfide	developmental, female, male	75-15-0	July 1, 1989
Carbon monoxide	developmental	630-08-0	July 1, 1989
Carbon tetrachloride	cancer	56-23-5	October 1, 1987
Carbon-black extracts	cancer	---	January 1, 1990
Carboplatin	developmental	41575-94-4	July 1, 1990
N-Carboxymethyl-N-nitrosourea	cancer	60391-92-6	January 25, 2002
Catechol	cancer	120-80-9	July 15, 2003
Ceramic fibers (airborne particles of respirable size)	cancer	---	July 1, 1990
Certain combined chemotherapy for lymphomas	cancer	---	February 27, 1987
Chenodiol	developmental	474-25-9	April 1, 1990
Chlorambucil	cancer	305-03-3	February 27, 1987
Chlorambucil	developmental	305-03-3	January 1, 1989
Chloramphenicol	cancer	56-75-7	October 1, 1989
Chlorcyclizine hydrochloride	developmental	1620-21-9	July 1, 1987
Chlordane	cancer	57-74-9	July 1, 1988
Chlordecone (Kepone)	cancer	143-50-0	January 1, 1988
Chlordecone (Kepone)	developmental	143-50-0	January 1, 1989

Chlordiazepoxide	developmental	58-25-3	January 1, 1992
Chlordiazepoxide hydrochloride	developmental	438-41-5	January 1, 1992
Chlordimeform	cancer	6164-98-3	January 1, 1989
Chlorendic acid	cancer	115-28-6	July 1, 1989
Chlorinated paraffins (Average chain length, C12; approximately 60 percent chlorine by weight)	cancer	108171-26-2	July 1, 1989
p-Chloroaniline	cancer	106-47-8	October 1, 1994
p-Chloroaniline hydrochloride	cancer	20265-96-7	May 15, 1998
~~Chlorodibromomethane~~ Delisted October 29, 1999	~~cancer~~	~~124-48-1~~	~~January 1, 1990~~
Chloroethane (Ethyl chloride)	cancer	75-00-3	July 1, 1990
1-(2-Chloroethyl)-3-cyclohexyl-1-nitrosourea (CCNU) (Lomustine)	cancer	13010-47-4	January 1, 1988
1-(2-Chloroethyl)-3-cyclohexyl-1-nitrosourea (CCNU) Lomustine)	developmental	13010-47-4	July 1, 1990
1-(2-Chloroethyl)-3-(4-methyl-cyclohexyl) -1-nitrosourea (Methyl-CCNU)	cancer	13909-09-6	October 1, 1988
Chloroform	cancer	67-66-3	October 1, 1987
Chloroform	developmental	67-66-3	August 7, 2009
Chloromethyl methyl ether (technical grade)	cancer	107-30-2	February 27, 1987
3-Chloro-2-methylpropene	cancer	563-47-3	July 1, 1989
1-Chloro-4-nitrobenzene	cancer	100-00-5	October 29, 1999
4-Chloro-*o*-phenylenediamine	cancer	95-83-0	January 1, 1988
Chloroprene	cancer	126-99-8	June 2, 2000
2-Chloropropionic acid	male	598-78-7	August 7, 2009
Chlorothalonil	cancer	1897-45-6	January 1, 1989
p-Chloro-*o*-toluidine	cancer	95-69-2	January 1, 1990
p-Chloro-*o*-toluidine, strong acid salts of	cancer	---	May 15, 1998
5-Chloro-*o*-toluidine and its strong acid salts	cancer	---	October 24, 1997
Chlorotrianisene	cancer	569-57-3	September 1, 1996
Chlorozotocin	cancer	54749-90-5	January 1, 1992
Chlorsulfuron	developmental, female, ~~male~~	64902-72-3	May 14, 1999
Chromium (hexavalent compounds)	cancer	---	February 27, 1987
Chromium (hexavalent compounds)	developmental, female, male	---	December 19, 2008
Chrysene	cancer	218-01-9	January 1, 1990
C.I. Acid Red 114	cancer	6459-94-5	July 1, 1992
C.I. Basic Red 9 monohydrochloride	cancer	569-61-9	July 1, 1989
C.I. Direct Blue 15	cancer	2429-74-5	August 26, 1997
C.I. Direct Blue 218	cancer	28407-37-6	August 26, 1997
C.I. Solvent Yellow 14	cancer	842-07-9	May 15, 1998
Ciclosporin (Cyclosporin A; Cyclosporine)	cancer	59865-13-3 79217-60-0	January 1, 1992
Cidofovir	cancer, developmental, female, male	113852-37-2	January 29, 1999
Cinnamyl anthranilate	cancer	87-29-6	July 1, 1989

Cisplatin	cancer	15663-27-1	October 1, 1988
Citrus Red No. 2	cancer	6358-53-8	October 1, 1989
Cladribine	developmental	4291-63-8	September 1, 1996
Clarithromycin	developmental	81103-11-9	May 1, 1997
Clobetasol propionate	developmental, female	25122-46-7	May 15, 1998
Clofibrate	cancer	637-07-0	September 1, 1996
Clomiphene citrate	developmental	50-41-9	April 1, 1990
Clorazepate dipotassium	developmental	57109-90-7	October 1, 1992
Cobalt metal powder	cancer	7440-48-4	July 1, 1992
Cobalt [II] oxide	cancer	1307-96-6	July 1, 1992
Cobalt sulfate	cancer	10124-43-3	May 20, 2005
Cobalt sulfate heptahydrate	cancer	10026-24-1	June 2, 2000
Cocaine	developmental, female	50-36-2	July 1, 1989
Coconut oil diethanolamine condensate (cocamide diethanolamine)	cancer	---	June 22, 2012
Codeine phosphate	developmental	52-28-8	May 15, 1998
Coke oven emissions	cancer	---	February 27, 1987
Colchicine	developmental, male	64-86-8	October 1, 1992
Conjugated estrogens	cancer	---	February 27, 1987
Conjugated estrogens	developmental	---	April 1, 1990
Creosotes	cancer	---	October 1, 1988
p-Cresidine	cancer	120-71-8	January 1, 1988
Cumene	cancer	98-82-8	April 6, 2010
Cupferron	cancer	135-20-6	January 1, 1988
Cyanazine	developmental	21725-46-2	April 1, 1990
Cycasin	cancer	14901-08-7	January 1, 1988
Cycloate	developmental	1134-23-2	March 19, 1999
~~Cyclohexanol~~ Delisted January 25, 2002	~~male~~	~~108-93-0~~	~~November 6, 1998~~
Cycloheximide	developmental	66-81-9	January 1, 1989
Cyclopenta[cd]pyrene	cancer	27208-37-3	April 29, 2011
Cyclophosphamide (anhydrous)	cancer	50-18-0	February 27, 1987
Cyclophosphamide (anhydrous)	developmental, female, male	50-18-0	January 1, 1989
Cyclophosphamide (hydrated)	cancer	6055-19-2	February 27, 1987
Cyclophosphamide (hydrated)	developmental, female, male	6055-19-2	January 1, 1989
Cyhexatin	developmental	13121-70-5	January 1, 1989
Cytarabine	developmental	147-94-4	January 1, 1989
Cytembena	cancer	21739-91-3	May 15, 1998
D&C Orange No. 17	cancer	3468-63-1	July 1, 1990
D&C Red No. 8	cancer	2092-56-0	October 1, 1990
D&C Red No. 9	cancer	5160-02-1	July 1, 1990
D&C Red No. 19	cancer	81-88-9	July 1, 1990
Dacarbazine	cancer	4342-03-4	January 1, 1988
Dacarbazine	developmental	4342-03-4	January 29, 1999
Daminozide	cancer	1596-84-5	January 1, 1990
Danazol	developmental	17230-88-5	April 1, 1990

Dantron (Chrysazin; 1,8-Dihydroxyanthraquinone)	cancer	117-10-2	January 1, 1992
Daunomycin	cancer	20830-81-3	January 1, 1988
Daunorubicin hydrochloride	developmental	23541-50-6	July 1, 1990
2,4-D butyric acid	~~developmental~~, male	94-82-6	June 18, 1999
DDD (Dichlorodiphenyl-dichloroethane)	cancer	72-54-8	January 1, 1989
DDE (Dichlorodi-phenyldichloroethylene)	cancer	72-55-9	January 1, 1989
DDT (Dichlorodi-phenyltrichloroethane)	cancer	50-29-3	October 1 , 1987
o,p'-DDT	developmental, female, male	789-02-6	May 15, 1998
p,p'-DDT	developmental, female, male	50-29-3	May 15, 1998
DDVP (Dichlorvos)	cancer	62-73-7	January 1, 1989
Demeclocycline hydrochloride (internal use)	developmental	64-73-3	January 1, 1992
~~2,4-DP (dichloroprop)~~ Delisted January 25, 2002	~~developmental~~	~~120-36-5~~	~~April 27, 1999~~
N,N'-Diacetylbenzidine	cancer	613-35-4	October 1, 1989
2,4-Diaminoanisole	cancer	615-05-4	October 1, 1990
2,4-Diaminoanisole sulfate	cancer	39156-41-7	January 1, 1988
4,4'-Diaminodiphenyl ether (4,4'-Oxydianiline)	cancer	101-80-4	January 1, 1988
2,4-Diaminotoluene	cancer	95-80-7	January 1, 1988
Diaminotoluene (mixed)	cancer	---	January 1, 1990
Diazepam	developmental	439-14-5	January 1, 1992
Diazoaminobenzene	cancer	136-35-6	May 20, 2005
Diazoxide	developmental	364-98-7	February 27, 2001
Dibenz[a,h]acridine	cancer	226-36-8	January 1, 1988
Dibenz[a,j]acridine	cancer	224-42-0	January 1, 1988
Dibenz[a,h]anthracene	cancer	53-70-3	January 1, 1988
7H-Dibenzo[c,g]carbazole	cancer	194-59-2	January 1, 1988
Dibenzo[a,e]pyrene	cancer	192-65-4	January 1, 1988
Dibenzo[a,h]pyrene	cancer	189-64-0	January 1, 1988
Dibenzo[a,i]pyrene	cancer	189-55-9	January 1, 1988
Dibenzo[a,l]pyrene	cancer	191-30-0	January 1, 1988
Dibromoacetic acid	cancer	631-64-1	June 17, 2008
Dibromoacetonitrile	cancer	3252-43-5	May 3, 2011
1,2-Dibromo-3-chloropropane (DBCP)	cancer	96-12-8	July 1, 1987
1,2-Dibromo-3-chloropropane (DBCP)	male	96-12-8	February 27, 1987
2,3-Dibromo-1-propanol	cancer	96-13-9	October 1, 1994
Dichloroacetic acid	cancer	79-43-6	May 1, 1996
Dichloroacetic acid	male	79-43-6	August 7, 2009
p-Dichlorobenzene	cancer	106-46-7	January 1, 1989
3,3'-Dichlorobenzidine	cancer	91-94-1	October 1, 1987
3,3'-Dichlorobenzidine dihydrochloride	cancer	612-83-9	May 15, 1998

1,1-Dichloro-2,2-bis(*p*-chlorophenyl)ethylene (DDE)	developmental, male	72-55-9	March 30, 2010
1,4-Dichloro-2-butene	cancer	764-41-0	January 1, 1990
3,3'-Dichloro-4,4'-diaminodiphenyl ether	cancer	28434-86-8	January 1, 1988
1,1-Dichloroethane	cancer	75-34-3	January 1, 1990
Dichloromethane (Methylene chloride)	cancer	75-09-2	April 1, 1988
Dichlorophene	developmental	97-23-4	April 27, 1999
1,2-Dichloropropane	cancer	78-87-5	January 1, 1990
1,3-Dichloro-2-propanol (1,3-DCP)	cancer	96-23-1	October 8, 2010
1,3-Dichloropropene	cancer	542-75-6	January 1, 1989
Dichlorphenamide	developmental	120-97-8	February 27, 2001
Diclofop-methyl	cancer	51338-27-3	April 6, 2010
Diclofop methyl	developmental	51338-27-3	March 5, 1999
Dicumarol	developmental	66-76-2	October 1, 1992
Dieldrin	cancer	60-57-1	July 1, 1988
Dienestrol	cancer	84-17-3	January 1, 1990
Diepoxybutane	cancer	1464-53-5	January 1, 1988
Diesel engine exhaust	cancer	---	October 1, 1990
Diethanolamine	cancer	111-42-2	June 22, 2012
Di(2-ethylhexyl)phthalate (DEHP)	cancer	117-81-7	January 1, 1988
Di(2-ethylhexyl)phthalate (DEHP)	developmental, male	117-81-7	October 24, 2003
1,2-Diethylhydrazine	cancer	1615-80-1	January 1, 1988
Diethylstilbestrol (DES)	cancer	56-53-1	February 27, 1987
Diethylstilbestrol (DES)	developmental	56-53-1	July 1, 1987
Diethyl sulfate	cancer	64-67-5	January 1, 1988
Diflunisal	developmental, female	22494-42-4	January 29, 1999
Diglycidyl ether	male	2238-07-5	August 7, 2009
Diglycidyl resorcinol ether (DGRE)	cancer	101-90-6	July 1, 1989
Dihydroergotamine mesylate	developmental	6190-39-2	May 1, 1997
Dihydrosafrole	cancer	94-58-6	January 1, 1988
Di-isodecyl phthalate (DIDP)	developmental	68515-49-1/ 26761-40-0	April 20, 2007
Diisopropyl sulfate	cancer	2973-10-6	April 1, 1993
Diltiazem hydrochloride	developmental	33286-22-5	February 27, 2001
3,3'-Dimethoxybenzidine (*o*-Dianisidine)	cancer	119-90-4	January 1, 1988
3,3'-Dimethoxybenzidine dihydrochloride (*o*-Dianisidine dihydrochloride)	cancer	20325-40-0	October 1, 1990
3,3'-Dimethoxybenzidine-based dyes metabolized to 3,3'-dimethoxybenzidine	cancer	---	June 11, 2004
N, N-Dimethylacetamide	developmental	127-19-5	May 21, 2010
4-Dimethylaminoazobenzene	cancer	60-11-7	January 1, 1988
trans-2-[(Dimethylamino)methylimino]-5-[2-(5-nitro-2-furyl)vinyl]-1,3,4-oxadiazole	cancer	55738-54-0	January 1, 1988
7,12-Dimethylbenz(a)anthracene	cancer	57-97-6	January 1, 1990
3,3'-Dimethylbenzidine (ortho-Tolidine)	cancer	119-93-7	January 1, 1988

3,3'-Dimethylbenzidine-based dyes metabolized to 3,3'-dimethylbenzidine	cancer	---	June 11, 2004
3,3'-Dimethylbenzidine dihydrochloride	cancer	612-82-8	April 1, 1992
Dimethylcarbamoyl chloride	cancer	79-44-7	January 1, 1988
1,1-Dimethylhydrazine (UDMH)	cancer	57-14-7	October 1, 1989
1,2-Dimethylhydrazine	cancer	540-73-8	January 1, 1988
Dimethyl sulfate	cancer	77-78-1	January 1, 1988
Dimethylvinylchloride	cancer	513-37-1	July 1, 1989
Di-*n*-butyl phthalate (DBP)	developmental, female, male	84-74-2	December 2, 2005
Di-*n*-hexyl phthalate (DnHP)	female, male	84-75-3	December 2, 2005
m-Dinitrobenzene	male	99-65-0	July 1, 1990
o-Dinitrobenzene	male	528-29-0	July 1, 1990
p-Dinitrobenzene	male	100-25-4	July 1, 1990
3,7-Dinitrofluoranthene	cancer	105735-71-5	August 26, 1997
3,9-Dinitrofluoranthene	cancer	22506-53-2	August 26, 1997
1,3-Dinitropyrene	cancer	75321-20-9	November 2, 2012
1,6-Dinitropyrene	cancer	42397-64-8	October 1, 1990
1,8-Dinitropyrene	cancer	42397-65-9	October 1, 1990
Dinitrotoluene (technical grade)	female, male	---	August 20, 1999
Dinitrotoluene mixture, 2,4-/2,6-	cancer	---	May 1, 1996
2,4-Dinitrotoluene	cancer	121-14-2	July 1, 1988
2,4-Dinitrotoluene	male	121-14-2	August 20, 1999
2,6-Dinitrotoluene	cancer	606-20-2	July 1, 1995
2,6-Dinitrotoluene	male	606-20-2	August 20, 1999
Dinocap	developmental	39300-45-3	April 1, 1990
Dinoseb	developmental, male	88-85-7	January 1, 1989
Di-*n*-propyl isocinchomeronate (MGK Repellent 326)	cancer	136-45-8	May 1, 1996
1,4-Dioxane	cancer	123-91-1	January 1, 1988
Diphenylhydantoin (Phenytoin)	cancer	57-41-0	January 1, 1988
Diphenylhydantoin (Phenytoin)	developmental	57-41-0	July 1, 1987
Diphenylhydantoin (Phenytoin), sodium salt	cancer	630-93-3	January 1, 1988
Direct Black 38 (technical grade)	cancer	1937-37-7	January 1, 1988
Direct Blue 6 (technical grade)	cancer	2602-46-2	January 1, 1988
Direct Brown 95 (technical grade)	cancer	16071-86-6	October 1, 1988
Disodium cyanodithioimido-carbonate	developmental	138-93-2	March 30, 1999
Disperse Blue 1	cancer	2475-45-8	October 1, 1990
Diuron	cancer	330-54-1	May 31, 2002
Doxorubicin hydrochloride (Adriamycin)	cancer	25316-40-9	July 1, 1987
Doxorubicin hydrochloride (Adriamycin)	developmental, male	25316-40-9	January 29, 1999
Doxycycline (internal use)	developmental	564-25-0	July 1, 1990
Doxycycline calcium (internal use)	developmental	94088-85-4	January 1, 1992
Doxycycline hyclate (internal use)	developmental	24390-14-5	October 1, 1991
Doxycycline monohydrate (internal use)	developmental	17086-28-1	October 1, 1991

Endrin	developmental	72-20-8	May 15, 1998
Environmental tobacco smoke (ETS)	developmental	---	June 9, 2006
Epichlorohydrin	cancer	106-89-8	October 1, 1987
Epichlorohydrin	male	106-89-8	September 1, 1996
Epoxiconazole	cancer	135319-73-2	April 15, 2011
Ergotamine tartrate	developmental	379-79-3	April 1, 1990
Erionite	cancer	12510-42-8/ 66733-21-9	October 1, 1988
Estradiol 17B	cancer	50-28-2	January 1, 1988
Estragole	cancer	140-67-0	October 29, 1999
Estrogens, steroidal	cancer	---	August 19, 2005
Estrogen-progestogen (combined) as menopausal therapy	cancer	---	November 4, 2011
Estrone	cancer	53-16-7	January 1, 1988
Estropipate	cancer, developmental	7280-37-7	August 26, 1997
Ethanol in alcoholic beverages	cancer	---	April 29, 2011
Ethinylestradiol	cancer	57-63-6	January 1, 1988
Ethionamide	developmental	536-33-4	August 26, 1997
Ethoprop	cancer	13194-48-4	February 27, 2001
Ethyl acrylate	cancer	140-88-5	July 1, 1989
Ethyl alcohol in alcoholic beverages	developmental	---	October 1, 1987
Ethylbenzene	cancer	100-41-4	June 11, 2004
Ethyl-tert-butyl ether	male	637-92-3	December 18, 2009
Ethyl dipropylthiocarbamate	developmental	759-94-4	April 27, 1999
Ethyl-4,4'-dichlorobenzilate	cancer	510-15-6	January 1, 1990
Ethylene dibromide	cancer	106-93-4	July 1, 1987
Ethylene dibromide	developmental, male	106-93-4	May 15, 1998
Ethylene dichloride (1,2-Dichloroethane)	cancer	107-06-2	October 1, 1987
Ethylene glycol monoethyl ether	developmental, male	110-80-5	January 1, 1989
Ethylene glycol monoethyl ether acetate	developmental, male	111-15-9	January 1, 1993
Ethylene glycol monomethyl ether	developmental, male	109-86-4	January 1, 1989
Ethylene glycol monomethyl ether acetate	developmental, male	110-49-6	January 1, 1993
Ethyleneimine	cancer	151-56-4	January 1, 1988
Ethylene oxide	cancer	75-21-8	July 1, 1987
Ethylene oxide	female	75-21-8	February 27, 1987
Ethylene oxide	developmental, male	75-21-8	August 7, 2009
Ethylene thiourea	cancer	96-45-7	January 1, 1988
Ethylene thiourea	developmental	96-45-7	January 1, 1993
2-Ethylhexanoic acid	developmental	149-57-5	August 7, 2009
Ethyl methanesulfonate	cancer	62-50-0	January 1, 1988
Etodolac	developmental, female	41340-25-4	August 20, 1999
Etoposide	cancer	33419-42-0	November 4, 2011
Etoposide	developmental	33419-42-0	July 1, 1990
Etoposide in combination with cisplatin and bleomycin	cancer	---	November 4, 2011
Etretinate	developmental	54350-48-0	July 1, 1987

Fenoxaprop ethyl	developmental	66441-23-4	March 26, 1999
Fenoxycarb	cancer	72490-01-8	June 2, 2000
Filgrastim	developmental	121181-53-1	February 27, 2001
Fluazifop butyl	developmental	69806-50-4	November 6, 1998
Flunisolide	developmental, female	3385-03-3	May 15, 1998
Fluorouracil	developmental	51-21-8	January 1, 1989
Fluoxymesterone	developmental	76-43-7	April 1, 1990
Flurazepam hydrochloride	developmental	1172-18-5	October 1, 1992
Flurbiprofen	developmental, female	5104-49-4	August 20, 1999
Flutamide	developmental	13311-84-7	July 1, 1990
Fluticasone propionate	developmental	80474-14-2	May 15, 1998
Fluvalinate	developmental	69409-94-5	November 6, 1998
Folpet	cancer	133-07-3	January 1, 1989
Formaldehyde (gas)	cancer	50-00-0	January 1, 1988
2-(2-Formylhydrazino)-4-(5-nitro-2-furyl)thiazole	cancer	3570-75-0	January 1, 1988
Fumonisin B_1	cancer	116355-83-0	November 14, 2003
Furan	cancer	110-00-9	October 1, 1993
Furazolidone	cancer	67-45-8	January 1, 1990
Furmecyclox	cancer	60568-05-0	January 1, 1990
Fusarin C	cancer	79748-81-5	July 1, 1995
Gallium arsenide	cancer	1303-00-0	August 1, 2008
Ganciclovir	cancer, developmental, male	82410-32-0	August 26, 1997
Ganciclovir sodium	developmental, male	107910-75-8	August 26, 1997
Gasoline engine exhaust (condensates/extracts)	cancer	---	October 1, 1990
Gemfibrozil	cancer	25812-30-0	December 22, 2000
Gemfibrozil	female, male	25812-30-0	August 20, 1999
Glass wool fibers (inhalable and biopersistent)	cancer	---	July 1, 1990
Glu-P-1 (2-Amino-6-methyldipyrido [1,2- a:3',2'-d]imidazole)	cancer	67730-11-4	January 1, 1990
Glu-P-2 (2-Aminodipyrido [1,2-a:3',2'-d]imidazole)	cancer	67730-10-3	January 1, 1990
Glycidaldehyde	cancer	765-34-4	January 1, 1988
Glycidol	cancer	556-52-5	July 1, 1990
Goserelin acetate	developmental, female, male	65807-02-5	August 26, 1997
Griseofulvin	cancer	126-07-8	January 1, 1990
Gyromitrin (Acetaldehyde methylformylhydrazone)	cancer	16568-02-8	January 1, 1988
Halazepam	developmental	23092-17-3	July 1, 1990
Halobetasol propionate	developmental	66852-54-8	August 20, 1999
Haloperidol	developmental, female	52-86-8	January 29, 1999
Halothane	developmental	151-67-7	September 1, 1996
HC Blue 1	cancer	2784-94-3	July 1, 1989
Heptachlor	cancer	76-44-8	July 1, 1988
Heptachlor	developmental	76-44-8	August 20, 1999

Heptachlor epoxide	cancer	1024-57-3	July 1, 1988
Herbal remedies containing plant species of the genus Aristolochia	cancer	---	July 9, 2004
Hexachlorobenzene	cancer	118-74-1	October 1, 1987
Hexachlorobenzene	developmental	118-74-1	January 1, 1989
Hexachlorobutadiene	cancer	87-68-3	May 3, 2011
Hexachlorocyclohexane (technical grade)	cancer	---	October 1, 1987
Hexachlorodibenzodioxin	cancer	34465-46-8	April 1, 1988
Hexachloroethane	cancer	67-72-1	July 1, 1990
2,4-Hexadienal (89% trans, trans isomer; 11% cis, trans isomer)	cancer	---	March 4, 2005
Hexafluoroacetone	male	684-16-2	August 1, 2008
Hexamethylphosphoramide	cancer	680-31-9	January 1, 1988
Hexamethylphosphoramide	male	680-31-9	October 1, 1994
Histrelin acetate	developmental	---	May 15, 1998
Hydramethylnon	developmental, male	67485-29-4	March 5, 1999
Hydrazine	cancer	302-01-2	January 1, 1988
Hydrazine sulfate	cancer	10034-93-2	January 1, 1988
Hydrazobenzene (1,2-Diphenylhydrazine)	cancer	122-66-7	January 1, 1988
1-Hydroxyanthraquinone	cancer	129-43-1	May 27, 2005
Hydroxyurea	developmental	127-07-1	May 1, 1997
Idarubicin hydrochloride	developmental, male	57852-57-0	August 20, 1999
Ifosfamide	developmental	3778-73-2	July 1, 1990
Iodine-131	developmental	10043-66-0	January 1, 1989
Imazalil	cancer	35554-44-0	May 20, 2011
Indeno[1,2,3-cd]pyrene	cancer	193-39-5	January 1, 1988
Indium phosphide	cancer	22398-80-7	February 27, 2001
IQ (2-Amino-3-methylimidazo [4,5-f] quinoline)	cancer	76180-96-6	April 1, 1990
Iprodione	cancer	36734-19-7	May 1, 1996
Iprovalicarb	cancer	140923-17-7 140923-25-7	June 1, 2007
Iron dextran complex	cancer	9004-66-4	January 1, 1988
Isobutyl nitrite	cancer	542-56-3	May 1, 1996
Isoprene	cancer	78-79-5	May 1, 1996
Isopyrazam	cancer	881685-58-1	July 24, 2012
~~Isosafrole~~ Delisted December 8, 2006	~~cancer~~	~~120-58-1~~	~~October 1, 1989~~
Isotretinoin	developmental	4759-48-2	July 1, 1987
Isoxaflutole	cancer	141112-29-0	December 22, 2000
Kresoxim-methyl	cancer	143390-89-0	February 3, 2012
Lactofen	cancer	77501-63-4	January 1, 1989
Lasiocarpine	cancer	303-34-4	April 1, 1988
Lead	developmental, female, male	---	February 27, 1987
Lead and lead compounds	cancer	---	October 1, 1992

Lead acetate	cancer	301-04-2	January 1, 1988
Lead phosphate	cancer	7446-27-7	April 1, 1988
Lead subacetate	cancer	1335-32-6	October 1, 1989
Leather dust	cancer	---	April 29, 2011
Leuprolide acetate	developmental, female, male	74381-53-6	August 26, 1997
Levodopa	developmental	59-92-7	January 29, 1999
Levonorgestrel implants	female	797-63-7	May 15, 1998
Lindane and other hexachloro-cyclohexane isomers	cancer	---	October 1, 1989
Linuron	developmental	330-55-2	March 19, 1999
Lithium carbonate	developmental	554-13-2	January 1, 1991
Lithium citrate	developmental	919-16-4	January 1, 1991
Lorazepam	developmental	846-49-1	July 1, 1990
Lovastatin	developmental	75330-75-5	October 1, 1992
Lynestrenol	cancer	52-76-6	February 27, 2001
Malonaldehyde, sodium salt	cancer	24382-04-5	May 3, 2011
Mancozeb	cancer	8018-01-7	January 1, 1990
Maneb	cancer	12427-38-2	January 1, 1990
Marijuana smoke	cancer	---	June 19, 2009
Me-A-alpha-C (2-Amino-3-methyl-9H-pyrido[2,3-b]indole)	cancer	68006-83-7	January 1, 1990
Mebendazole	developmental	31431-39-7	August 20, 1999
Medroxyprogesterone acetate	cancer	71-58-9	January 1, 1990
Medroxyprogesterone acetate	developmental	71-58-9	April 1, 1990
Megestrol acetate	developmental	595-33-5	January 1, 1991
MeIQ (2-Amino-3,4-dimethyl-imidazo[4,5-f]quinoline)	cancer	77094-11-2	October 1, 1994
MeIQx (2-Amino-3,8-dimethyl-imidazo[4,5-f]quinoxaline)	cancer	77500-04-0	October 1, 1994
Melphalan	cancer	148-82-3	February 27, 1987
Melphalan	developmental	148-82-3	July 1, 1990
Menotropins	developmental	9002-68-0	April 1, 1990
Mepanipyrim	cancer	110235-47-7	July 1, 2008
Meprobamate	developmental	57-53-4	January 1, 1992
Mercaptopurine	developmental	6112-76-1	July 1, 1990
Mercury and mercury compounds	developmental	---	July 1, 1990
Merphalan	cancer	531-76-0	April 1, 1988
Mestranol	cancer	72-33-3	April 1, 1988
Metam potassium	cancer	137-41-7	December 31, 2010
Methacycline hydrochloride	developmental	3963-95-9	January 1, 1991
Metham sodium	cancer	137-42-8	November 6, 1998
Metham sodium	developmental	137-42-8	May 15, 1998
Methanol	developmental	67-56-1	March 16, 2012
Methazole	developmental	20354-26-1	December 1, 1999
Methimazole	developmental	60-56-0	July 1, 1990
Methotrexate	developmental	59-05-2	January 1, 1989
Methotrexate sodium	developmental	15475-56-6	April 1, 1990
5-Methoxypsoralen with ultraviolet A therapy	cancer	484-20-8	October 1, 1988

8-Methoxypsoralen with ultraviolet A therapy	cancer	298-81-7	February 27, 1987
2-Methylaziridine (Propyleneimine)	cancer	75-55-8	January 1, 1988
Methylazoxymethanol	cancer	590-96-5	April 1, 1988
Methylazoxymethanol acetate	cancer	592-62-1	April 1, 1988
Methyl bromide, as a structural fumigant	developmental	74-83-9	January 1, 1993
Methyl carbamate	cancer	598-55-0	May 15, 1998
Methyl chloride	developmental	74-87-3	March 10, 2000
Methyl chloride	male	74-87-3	August 7, 2009
3-Methylcholanthrene	cancer	56-49-5	January 1, 1990
5-Methylchrysene	cancer	3697-24-3	April 1, 1988
4,4'-Methylene bis(2-chloroaniline)	cancer	101-14-4	July 1, 1987
4,4'-Methylene bis(N,N-dimethyl) benzenamine	cancer	101-61-1	October 1, 1989
4,4'-Methylene bis(2-methylaniline)	cancer	838-88-0	April 1, 1988
4,4'-Methylenedianiline	cancer	101-77-9	January 1, 1988
4,4'-Methylenedianiline dihydrochloride	cancer	13552-44-8	January 1, 1988
Methyleugenol	cancer	93-15-2	November 16, 2001
Methylhydrazine and its salts	cancer	---	July 1, 1992
2-Methylimidazole	cancer	693-98-1	June 22, 2012
4-Methylimidazole	cancer	822-36-6	January 7, 2011
Methyl iodide	cancer	74-88-4	April 1, 1988
Methyl isobutyl ketone	cancer	108-10-1	November 4, 2011
Methyl isocyanate (MIC)	developmental, female	624-83-9	November 12, 2010
Methyl isopropyl ketone	developmental	563-80-4	February 17, 2012
Methyl mercury	developmental	---	July 1, 1987
Methylmercury compounds	cancer	---	May 1, 1996
Methyl methanesulfonate	cancer	66-27-3	April 1, 1988
Methyl n-butyl ketone	male	591-78-6	August 7, 2009
2-Methyl-1-nitroanthraquinone (of uncertain purity)	cancer	129-15-7	April 1, 1988
N-Methyl-N'-nitro-N-nitrosoguanidine	cancer	70-25-7	April 1, 1988
N-Methylolacrylamide	cancer	924-42-5	July 1, 1990
N-Methylpyrrolidone	developmental	872-50-4	June 15, 2001
α-Methyl styrene (alpha-Methylstyrene)	cancer	98-83-9	November 2, 2012
α-Methyl styrene	female	98-83-9	July 29, 2011
Methyltestosterone	developmental	58-18-4	April 1, 1990
Methylthiouracil	cancer	56-04-2	October 1, 1989
Metiram	cancer	9006-42-2	January 1, 1990
Metiram	developmental	9006-42-2	March 30, 1999
Metronidazole	cancer	443-48-1	January 1, 1988
Michler's ketone	cancer	90-94-8	January 1, 1988
Midazolam hydrochloride	developmental	59467-96-8	July 1, 1990
Minocycline hydrochloride (internal use)	developmental	13614-98-7	January 1, 1992
Mirex	cancer	2385-85-5	January 1, 1988
Misoprostol	developmental	59122-46-2	April 1, 1990
Mitomycin C	cancer	50-07-7	April 1, 1988
Mitoxantrone hydrochloride	developmental	70476-82-3	July 1, 1990

Molinate	developmental, female, male	2212-67-1	December 11, 2009
MON 4660 (dichloroacetyl-1-oxa-4-azaspiro(4,5)-decane)	cancer	71526-07-3	March 22, 2011
MON 13900 (furilazole)	cancer	121776-33-8	March 22, 2011
3-Monochloropropane-1,2-diol (3-MCPD)	cancer	96-24-2	October 8, 2010
Monocrotaline	cancer	315-22-0	April 1, 1988
5-(Morpholinomethyl)-3-[(5-nitrofurfuryl-idene)-amino]-2-oxazolidinone	cancer	139-91-3	April 1, 1988
MOPP (vincristine-prednisone-nitrogen mustard-procarbazine mixture)	cancer	113803-47-7	November 4, 2011
Mustard Gas	cancer	505-60-2	February 27, 1987
MX (3-chloro-4-(dichloromethyl) 5-hydroxy-2(5H)-furanone)	cancer	77439-76-0	December 22, 2000
Myclobutanil	developmental, male	88671-89-0	April 16, 1999
Nabam	developmental	142-59-6	March 30, 1999
Nafarelin acetate	developmental	86220-42-0	April 1, 1990
Nafenopin	cancer	3771-19-5	April 1, 1988
Nalidixic acid	cancer	389-08-2	May 15, 1998
Naphthalene	cancer	91-20-3	April 19, 2002
1-Naphthylamine	cancer	134-32-7	October 1, 1989
2-Naphthylamine	cancer	91-59-8	February 27, 1987
Neomycin sulfate (internal use)	developmental	1405-10-3	October 1, 1992
Netilmicin sulfate	developmental	56391-57-2	July 1, 1990
Nickel (Metallic)	cancer	7440-02-0	October 1, 1989
Nickel acetate	cancer	373-02-4	October 1, 1989
Nickel carbonate	cancer	3333-67-3	October 1, 1989
Nickel carbonyl	cancer	13463-39-3	October 1, 1987
Nickel carbonyl	developmental	13463-39-3	September 1, 1996
Nickel compounds	cancer	---	May 7, 2004
Nickel hydroxide	cancer	12054-48-7; 12125-56-3	October 1, 1989
Nickelocene	cancer	1271-28-9	October 1, 1989
Nickel oxide	cancer	1313-99-1	October 1, 1989
Nickel refinery dust from the pyrometallurgical process	cancer	---	October 1, 1987
Nickel subsulfide	cancer	12035-72-2	October 1, 1987
Nicotine	developmental	54-11-5	April 1, 1990
Nifedipine	developmental, female, male	21829-25-4	January 29, 1999
Nimodipine	developmental	66085-59-4	April 24, 2001
Niridazole	cancer	61-57-4	April 1, 1988
Nitrapyrin	cancer	1929-82-4	October 5, 2005
Nitrapyrin	developmental	1929-82-4	March 30, 1999
Nitrilotriacetic acid	cancer	139-13-9	January 1, 1988
Nitrilotriacetic acid, trisodium salt monohydrate	cancer	18662-53-8	April 1, 1989
5-Nitroacenaphthene	cancer	602-87-9	April 1, 1988

~~5-Nitro-o-anisidine~~ Delisted December 8, 2006	~~cancer~~	~~99-59-2~~	~~October 1, 1989~~
o-Nitroanisole	cancer	91-23-6	October 1, 1992
Nitrobenzene	cancer	98-95-3	August 26, 1997
Nitrobenzene	male	98-95-3	March 30, 2010
4-Nitrobiphenyl	cancer	92-93-3	April 1, 1988
6-Nitrochrysene	cancer	7496-02-8	October 1, 1990
Nitrofen (technical grade)	cancer	1836-75-5	January 1, 1988
2-Nitrofluorene	cancer	607-57-8	October 1, 1990
Nitrofurantoin	male	67-20-9	April 1, 1991
Nitrofurazone	cancer	59-87-0	January 1, 1990
1-[(5-Nitrofurfurylidene)-amino]-2-imidazolidinone	cancer	555-84-0	April 1, 1988
N-[4-(5-Nitro-2-furyl)-2-thiazolyl] acetamide	cancer	531-82-8	April 1, 1988
Nitrogen mustard (Mechlorethamine)	cancer	51-75-2	January 1, 1988
Nitrogen mustard (Mechlorethamine)	developmental	51-75-2	January 1, 1989
Nitrogen mustard hydrochloride (Mechlorethamine hydrochloride)	cancer	55-86-7	April 1, 1988
Nitrogen mustard hydrochloride (Mechlorethamine hydrochloride)	developmental	55-86-7	July 1, 1990
Nitrogen mustard N-oxide	cancer	126-85-2	April 1, 1988
Nitrogen mustard N-oxide hydrochloride	cancer	302-70-5	April 1, 1988
Nitromethane	cancer	75-52-5	May 1, 1997
2-Nitropropane	cancer	79-46-9	January 1, 1988
1-Nitropyrene	cancer	5522-43-0	October 1, 1990
4-Nitropyrene	cancer	57835-92-4	October 1, 1990
N-Nitrosodi-*n*-butylamine	cancer	924-16-3	October 1, 1987
N-Nitrosodiethanolamine	cancer	1116-54-7	January 1, 1988
N-Nitrosodiethylamine	cancer	55-18-5	October 1, 1987
N-Nitrosodimethylamine	cancer	62-75-9	October 1, 1987
p-Nitrosodiphenylamine	cancer	156-10-5	January 1, 1988
N-Nitrosodiphenylamine	cancer	86-30-6	April 1, 1988
N-Nitrosodi-*n*-propylamine	cancer	621-64-7	January 1, 1988
N-Nitroso-N-ethylurea	cancer	759-73-9	October 1, 1987
3-(N-Nitrosomethylamino)-propionitrile	cancer	60153-49-3	April 1, 1990
4-(N-Nitrosomethylamino)-1-(3-pyridyl)1-butanone	cancer	64091-91-4	April 1, 1990
N-Nitrosomethylethylamine	cancer	10595-95-6	October 1, 1989
N-Nitroso-N-methylurea	cancer	684-93-5	October 1, 1987
N-Nitroso-N-methylurethane	cancer	615-53-2	April 1, 1988
N-Nitrosomethylvinylamine	cancer	4549-40-0	January 1, 1988
N-Nitrosomorpholine	cancer	59-89-2	January 1, 1988
N-Nitrosonornicotine	cancer	16543-55-8	January 1, 1988
N-Nitrosopiperidine	cancer	100-75-4	January 1, 1988
N-Nitrosopyrrolidine	cancer	930-55-2	October 1, 1987
N-Nitrososarcosine	cancer	13256-22-9	January 1, 1988
o-Nitrotoluene	cancer	88-72-2	May 15, 1998
Nitrous oxide	developmental	10024-97-2	August 1, 2008

Norethisterone (Norethindrone)	cancer	68-22-4	October 1, 1989
Norethisterone (Norethindrone)	developmental	68-22-4	April 1, 1990
Norethisterone acetate (Norethindrone acetate)	developmental	51-98-9	October 1, 1991
Norethisterone (Norethindrone) /Ethinyl estradiol	developmental	68-22-4/ 57-63-6	April 1, 1990
Norethisterone (Norethindrone)/Mestranol	developmental	68-22-4/ 72-33-3	April 1, 1990
Norethynodrel	cancer	68-23-5	February 27, 2001
Norgestrel	developmental	6533-00-2	April 1, 1990
Ochratoxin A	cancer	303-47-9	July 1, 1990
Oil Orange SS	cancer	2646-17-5	April 1, 1988
Oral contraceptives, combined	cancer	---	October 1, 1989
Oral contraceptives, sequential	cancer	---	October 1, 1989
Oryzalin	cancer	19044-88-3	September 12, 2008
Oxadiazon	cancer	19666-30-9	July 1, 1991
Oxadiazon	developmental	19666-30-9	May 15, 1998
Oxazepam	cancer	604-75-1	October 1, 1994
Oxazepam	developmental	604-75-1	October 1, 1992
p,p'-Oxybis(benzenesulfonyl hydrazide)	developmental	80-51-3	August 7, 2009
Oxydemeton methyl	female, male	301-12-2	November 6, 1998
Oxymetholone	cancer	434-07-1	January 1, 1988
Oxymetholone	developmental	434-07-1	May 1, 1997
Oxytetracycline (internal use)	developmental	79-57-2	January 1, 1991
Oxytetracycline hydrochloride (internal use)	developmental	2058-46-0	October 1, 1991
Oxythioquinox (Chinomethionat)	cancer	2439-01-2	August 20, 1999
Oxythioquinox (Chinomethionat)	developmental	2439-01-2	November 6, 1998
Paclitaxel	developmental, female, male	33069-62-4	August 26, 1997
Palygorskite fibers (> 5μm in length)	cancer	12174-11-7	December 28, 1999
Panfuran S	cancer	794-93-4	January 1, 1988
Paramethadione	developmental	115-67-3	July 1, 1990
Penicillamine	developmental	52-67-5	January 1, 1991
Pentachlorophenol	cancer	87-86-5	January 1, 1990
Pentobarbital sodium	developmental	57-33-0	July 1, 1990
Pentostatin	developmental	53910-25-1	September 1, 1996
Phenacemide	developmental	63-98-9	July 1, 1990
Phenacetin	cancer	62-44-2	October 1, 1989
Phenazopyridine	cancer	94-78-0	January 1, 1988
Phenazopyridine hydrochloride	cancer	136-40-3	January 1, 1988
Phenesterin	cancer	3546-10-9	July 1, 1989
Phenobarbital	cancer	50-06-6	January 1, 1990
Phenolphthalein	cancer	77-09-8	May 15, 1998
Phenoxybenzamine	cancer	59-96-1	April 1, 1988
Phenoxybenzamine hydrochloride	cancer	63-92-3	April 1, 1988
Phenprocoumon	developmental	435-97-2	October 1, 1992
o-Phenylenediamine and its salts	cancer	95-54-5	May 15, 1998

Phenyl glycidyl ether	cancer	122-60-1	October 1, 1990
Phenyl glycidyl ether	male	122-60-1	August 7, 2009
Phenylhydrazine and its salts	cancer	---	July 1, 1992
o-Phenylphenate, sodium	cancer	132-27-4	January 1, 1990
o-Phenylphenol	cancer	90-43-7	August 4, 2000
Phenylphosphine	developmental	638-21-1	August 7, 2009
PhiP(2-Amino-1-methyl-6-phenylimidazol[4,5-b]pyridine)	cancer	105650-23-5	October 1, 1994
Pimozide	developmental, female	2062-78-4	August 20, 1999
Pipobroman	developmental	54-91-1	July 1, 1990
Pirimicarb	cancer	23103-98-2	July 1, 2008
Plicamycin	developmental	18378-89-7	April 1, 1990
Polybrominated biphenyls	cancer	---	January 1, 1988
Polybrominated biphenyls	developmental	---	October 1, 1994
Polychlorinated biphenyls	cancer	---	October 1, 1989
Polychlorinated biphenyls	developmental	---	January 1, 1991
Polychlorinated biphenyls (containing 60 or more percent chlorine by molecular weight)	cancer	---	January 1, 1988
Polychlorinated dibenzo-*p*-dioxins	cancer	---	October 1, 1992
Polychlorinated dibenzofurans	cancer	---	October 1, 1992
Polygeenan	cancer	53973-98-1	January 1, 1988
Ponceau MX	cancer	3761-53-3	April 1, 1988
Ponceau 3R	cancer	3564-09-8	April 1, 1988
Potassium bromate	cancer	7758-01-2	January 1, 1990
Potassium dimethyldithiocarbamate	developmental	128-03-0	March 30 1999
Pravastatin sodium	developmental	81131-70-6	March 3, 2000
Prednisolone sodium phosphate	developmental	125-02-0	August 20, 1999
Primidone	cancer	125-33-7	August 20, 1999
Procarbazine	cancer	671-16-9	January 1, 1988
Procarbazine hydrochloride	cancer	366-70-1	January 1, 1988
	developmental		July 1, 1990
Procymidone	cancer	32809-16-8	October 1, 1994
Progesterone	cancer	57-83-0	January 1, 1988
Pronamide	cancer	23950-58-5	May 1, 1996
Propachlor	cancer	1918-16-7	February 27, 2001
1,3-Propane sultone	cancer	1120-71-4	January 1, 1988
Propargite	cancer	2312-35-8	October 1, 1994
Propargite	developmental	2312-35-8	June 15, 1999
beta-Propiolactone	cancer	57-57-8	January 1, 1988
Propoxur	cancer	114-26-1	August 11, 2006
Propylene glycol mono-*t*-butyl ether	cancer	57018-52-7	June 11, 2004
Propylene oxide	cancer	75-56-9	October 1, 1988
Propylthiouracil	cancer	51-52-5	January 1, 1988
Propylthiouracil	developmental	51-52-5	July 1, 1990
Pymetrozine	cancer	1233112-89-0	March 22, 2011
Pyridine	cancer	110-86-1	May 17, 2002
Pyrimethamine	developmental	58-14-0	January 29, 1999
Quazepam	developmental	36735-22-5	August 26, 1997
Quinoline and its strong acid salts	cancer	---	October 24, 1997
Quizalofop-ethyl	male	76578-14-8	December 24, 1999

Radionuclides	cancer	---	July 1, 1989
Reserpine	cancer	50-55-5	October 1, 1989
Residual (heavy) fuel oils	cancer	---	October 1, 1990
Resmethrin	cancer	10453-86-8	July 1, 2008
Resmethrin	developmental	10453-86-8	November 6, 1998
Retinol/retinyl esters, when in daily dosages in excess of 10,000 IU, or 3,000 retinol equivalents. (NOTE: Retinol/retinyl esters are required and essential for maintenance of normal reproductive function. The recommended daily level during pregnancy is 8,000 IU.)	developmental	---	July 1, 1989
Ribavirin	developmental	36791-04-5	April 1, 1990
Ribavirin	male	36791-04-5	February 27, 2001
Riddelliine	cancer	23246-96-0	December 3, 2004
Rifampin	developmental, female	13292-46-1	February 27, 2001
~~Saccharin~~ Delisted April 6, 2001	~~cancer~~	~~81-07-2~~	~~October 1, 1989~~
~~Saccharin, sodium~~ Delisted January 17, 2003	~~cancer~~	~~128-44-9~~	~~January 1, 1988~~
Safrole	cancer	94-59-7	January 1, 1988
Salted fish, Chinese-style	cancer	---	April 29, 2011
Secobarbital sodium	developmental	309-43-3	October 1, 1992
Selenium sulfide	cancer	7446-34-6	October 1, 1989
Sermorelin acetate	developmental	---	August 20, 1999
Shale-oils	cancer	68308-34-9	April 1, 1990
Silica, crystalline (airborne particles of respirable size)	cancer	---	October 1, 1988
Sodium dimethyldithiocarbamate	developmental	128-04-1	March 30 1999
Sodium fluoroacetate	male	62-74-8	November 6, 1998
Soots, tars, and mineral oils (untreated and mildly treated oils and used engine oils)	cancer	---	February 27, 1987
Spirodiclofen	cancer	148477-71-8	October 8, 2010
Spironolactone	cancer	52-01-7	May 1, 1997
Stanozolol	cancer	10418-03-8	May 1, 1997
Sterigmatocystin	cancer	10048-13-2	April 1, 1988
Streptomycin sulfate	developmental	3810-74-0	January 1, 1991
Streptozocin (streptozotocin)	developmental, female, male	18883-66-4	August 20, 1999
Streptozotocin (streptozocin)	cancer	18883-66-4	January 1, 1988
Strong inorganic acid mists containing sulfuric acid	cancer	---	March 14, 2003
Styrene oxide	cancer	96-09-3	October 1, 1988
Sulfallate	cancer	95-06-7	January 1, 1988
Sulfasalazine (salicylazosulfapyridine)	cancer	599-79-1	May 15, 1998
Sulfasalazine	male	599-79-1	January 29, 1999

Case #RO0003163 AND GEO TRACKER GLOBAL ID TI0000006546

Health and Safety Plan
For
Soil And Groundwater Sampling

at

Elegant Cleaner
1208 Lincoln Avenue
Alameda, CA 94501

Prepared for:

Mr. REZA SHEIKHAI, 1208 LINCOLN AVENUE, ALAMEDA, CA 94501/**Open Bank, 1000 Wilshire Blvd. Suite 500 Los Angeles, CA 90017**

Prepared by:

Dave Drilling Environmental Engineering, Inc. (DDEE)

2283/2285 Willow Avenue, Bay Point, CA 94565. Phone: (510) 258 – 5167

Website: www.ddfagala.com; contact: dave@ddfagala.com

July 30, 2015.

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STATEMENT OF LIMITATIONS AND PROFESSIONAL CERTIFICATION

Information provided in this HSP, prepared by DDEE, is intended exclusively for the use of DDEE and Regulatory Agencies for the evaluation of subsurface conditions regarding the subject site. The professional services provided, have been performed in accordance with practices generally accepted by other geologists, hydrologists, hydrogeologists, engineers, and environmental scientists practicing in the environmental engineering field. No other warranty, either expressed or implied, is made. As with all subsurface investigations, there is no guarantee that the work conducted will identify all sources or locations of contamination.

DDEE reserves the right to deviate from the proposed scope of services outlined in this Workplan as needed to obtain the required information. If such deviation is necessary, DDEE will seek prior approval from the regulatory agency overseeing this project.

This Workplan is issued for review and consideration for approval by the appropriate regulatory agency. This Workplan has been reviewed by a geologist/engineer who is registered in the State of California and whose signature and license number appears below.

Hassan Ibrahim

Hassan Ibrahim, PE.
Civil Engineer/Environmental Professional

Dave A. Fagorala
Environmental Professional

INTRODUCTION

DDEE has prepared this Health and Safety Plan for auditing the site operation for compliance with this HSP, and applicable Federal, State, or Local requirements, including compliance with 8CCR Section 5192 and 29 CFR 1910.120 training requirements, during installation of borings/monitoring wells to be utilized for collecting soil gas vapor, soil and groundwater samples at the Elegant Cleaner.

This HSP contains information describing the scope of work and appropriate information to prevent and/or report accidents during drilling and sampling from existing wells, soil borings and monitoring wells that will be constructed for groundwater monitoring for this project scope of work. It also provides guidelines for safe working environment for crew members working on heavy drilling equipment and provides procedure to prevent cross contamination of samples during collection and transportation of samples to the laboratory.

Soil, soil gas vapor and groundwater samples will be collected and analyzed at a State of California certified laboratory. Laboratory results will be evaluated and interpreted, to determine the extent of contamination in soil and groundwater.

The scope of work for which this HSP will be used includes:

- Drilling 6 soil borings to depth of approximately 20 feet;
- Collecting samples to characterize soil and groundwater quality where tested;
- Chemical Analysis of soil and groundwater samples;
- Collecting air quality samples; and
- Collecting soil gas vapor samples.

1.0 GENERAL INFORMATION

1.1 Site Safety Officer:

The Site Safety Officer is required to be on-site at all times. In the Site Safety Officer's absence, a designated alternate will assume the duties and responsibilities. The Site Safety Officer is responsible for implementing the site Health and Safety Plan (HSP) and shall be knowledgeable in various State and Federal regulations. This includes ensuring that field personnel have read and signed the HSP, and that a Tailgate safety meeting is conducted on-site each day prior to initiating field activities. In addition, the Site Safety Officer will be responsible for auditing the site operation for compliance with HSP and applicable Federal, State, or Local requirements, including compliance with 8CCR Section 5192 and 29 CFR 1910.120 training requirements. Any violations, unsafe conditions, and changes to the HSP will be discussed by Site Safety Officer with the area health and safety Manager. The Site Safety Officer shall stop work due to violations and unsafe conditions until appropriate action is taken to correct these deficiencies and the HSP shall be amended by the Site Safety Officer to include necessary changes.

1.2 Work Objectives/Scope:

This remedial investigation will include the drilling of approximately 6 borings, using a combination of direct-push, auger sampling equipment and gas vapor probe, for collection of soil gas vapor, soil and

groundwater samples. The boring locations were selected based on suspected source area where dry cleaning chemicals (PCE) unauthorized release and chemical storage occurred at the site (parking area at the back of building, dry cleaning machine area inside the building, chemical storage and office building areas). A PID instrument will be used to collect air inside the building and next door to the building for air quality measurement.

The objective of this health and safety plan is to provide guidelines for safe working environment for crew members working on heavy drilling equipment and to provide procedure to prevent cross contamination of samples during collection and transportation of samples to the laboratory.

The workplan on this project describes the scope of work for installation of 6 soil borings at the Elegant Cleaner site. The borings when completed will be utilized for the purpose of collecting soil, soil gas vapor and groundwater samples at the subject site. The samples collected during installation of the soil borings will be analyzed and used to determine levels of contamination at those locations.

Six borings will be advanced using auger and/or direct push methods (Geoprobe TM). The direct-push soil borings will be advanced to a depth of approximately 20 feet bgs. The soil samples are to be collected at 1 foot, 2 feet, 3 feet, 4 feet, 5 feet and 10 feet and five feet intervals. Soil samples will be collected directly from a 5-centimeter (2-inch) diameter direct- push rod containing an acetate sleeve. The sleeve will be cut into discreet sample intervals as described above.

Following sample collection, the borings will be sealed with cement grout composed of one sack of Portland Type ¼ cement (94lbs) to five gallons of clean water. The grout will be placed in the borings with tremie pipe method. Drill cuttings will be placed into a 208- liter (55 gallon) United Nations-approved drum.

Drilling and sampling equipments will be washed prior to use. In addition, to minimize cross-contamination between borings, all appropriate downhole drilling and sampling equipment will be washed between borings. Wash water generated during the field investigation will be contained in a United Nations- approved 208- liter (55- gallon) drum.

1.3 Project Activities:

Soil boring and soil sampling drilling with auger and direct-push equipment, soil boring construction, well survey, soil gas vapor and groundwater sample collection.

2.0 Site Health and Safety Information

2.1 SITE DESCRIPTION AND BACKGROUND HISTORY

The subject property is located at 1208 Lincoln Avenue, Alameda, California, in the partly commercial and residential area of the city of Alameda, California. The Property is a 5,500 square-foot irregularly shaped parcel that is developed with two-story 2,500 square-foot commercial building currently occupied by a dry cleaning business name Elegant Cleaner. The northern portion of the building's first floor features a main entrance door leading into a reception area and clothes racks. The southern portion features a large dry cleaning machine, storage and various pressers and dryers. The second floor is used as storage. There is an unpaved parking area at the southern end of the Property. Access to the Property is achieved from the north along Lincoln Avenue and southwest along Bay Street (ENCON ESA III 2015).

The Property was developed with the current site building in the late 1800s or early 1900s. The building was originally developed as a meat market and was occupied by a store until the mid-1900s. In the 1970s it was occupied by a general store, and in 1980 it was occupied by a pet store. The current occupant, Elegant Cleaners, began occupying the building in 1986. The dry cleaners upgraded to an eco-friendly dry cleaning machine (Appendix B) in 2005, which replaced the previous machine that used Tetrachloroethylene (PCE) (ENCON ESA III 2015).

The property on the east of the Elegant Cleaner is a two stories building used for church ministry, while the property on the west is the Faith Bible Church building. The Elegant Cleaner building toward the north is facing the Lincoln Road and the south side of the Elegant building is an open area. The second floor of the Elegant Cleaner building is the lunch area for the cleaner's staff.

2.3 Waste Characteristics:

Toxic

The soil and groundwater are potentially impacted with low-level tetrachloroetheylene (PCE) and its breakdown products (TCE, DCE, DCA, VC etc.).

2.4 Known/Suspected Chemical Hazards

The primary contaminants of concern include PCE and its breakdown products. These chemicals are typical of what may be encountered at a dry cleaning facility. Over exposure to high concentrations of these compounds can cause headache, dizziness, nausea, and eye, nose, and throat irritation. However such high concentrations are not expected at the site. Table 1 consists of a list representative chemical of concern and their occupational hazard characteristics (permissible exposure limits (PELs), immediately dangerous to life and health (IDLHs), etc.). Some of chemicals-of-concern have been determined to cause cancer and reproductive harm (Appendix A). Appendix A lists the Proposition 65 chemicals-of-concern, which is required by the State of California.

Overall Hazard Level: Serious, Moderate, Low, Unknown.
On-site Monitoring Required? Yes, No.

2.5 First Aid:

Inhalation: At first signs of headaches or dizziness, remove victim from work area and give fresh air. If breathing has stopped, administer rescue breathing. Get medical attention immediately.

Skin and Eye Contact: Flush eyes immediately with water for at least 15 minutes, including lifting the eyelids, and seek urgent medical attention. Remove contaminated clothing. Wash affected body areas with large amounts of soap and water. Get medical attention if irritation persists after washing.

Ingestion: Do not induce vomiting. Keep victim warm and at rest. Get medical attention.

2.6 Physical Hazards:

These hazards are primarily associated with on-site equipment and the general nature of construction work. D D E E personnel will also follow all safety rules established in the DDEE's training program.

The job safety analysis (Appendix B) will be reviewed with all workers prior to initiating site activities and periodically thereafter to assure on-going prevention of safety incidents.

Workers conducting various road surveys or sampling activities should be alert for potential injury and/or disease from stray animals. If stray animals appear, workers should avoid feeding these animals and the animal's behaviors should be noted. Animals, especially wild animals, usually avoid contact with humans. Wounded/injured animals and/or animals that display aggressive behavior may be carrying diseases, such as rabies and should be avoided and reported to animal welfare experts or county animal control office. If an animal bites a worker, immediate medical attention must be obtained and the location and type of animal, if unknown, be reported to the county animal control office.

	Heat		Slip, Trip, Fall		Evacuations/ Trenches
X	Cold	X	Noise		Moving Equipment
X	Rain	X	Underground Hazards	X	Traffic
	Fog	X	Overhead Hazards	X	Other: Stray Animals

2.7 Site Control Measures:

Further, equipment operators and drivers must have positive visual contact with any person within the work zone prior to moving the equipment. Drinking or smoking is not permitted in the work area. The Site Safety Officer shall enforce these measures and the buddy system, personal protective equipment (PPE) and training requirements for all on site personnel. Spills are not expected to be a concern on the project. However, if a spill occurs, absorbent materials are available.

A tailgate safety meeting will be held by the Site Safety Officer for all site personnel. The safety discussion will include, in addition to other items in this HSP, the following issues:

1. Site personnel will execute proper lifting techniques for heavy items. The maximum weight to be lifted by any site personnel should not exceed 60lbs.

   Sampling equipment shall be in good working order prior to operation. The auger and direct-push shall be inspected prior to operation by the technician and site Safety Officer.

2. If necessary, an exclusion zone shall be secured around the work area. At least two persons shall be required to be together while in the exclusion zone.

3. A/B/C-type fire extinguisher, first aid kit, eye wash, and hospital route map shall be staged for easy access during activities.

4. On-site personnel shall contact the site Safety Officer with any health and safety Issues.

5. Site Entry Procedure: The contractor shall provide the Regulatory Officer with safe access to the work site during the investigation.

6. Personal Decontamination Procedures: Eating, drinking, chewing gum or tobacco, smoking, or any practice that increases the probability of ingestion of material is prohibited in the exclusion zone. Wash hands and face prior to eating, drinking or smoking and before leaving the site. Remove contaminated clothing as soon as possible upon leaving the exclusion zone and disposed of with the excavated material or with other potentially impacted material. Kneeling, sitting, leaning, or general contact with potentially impacted surfaces, or with surfaces suspected ofbeing potentially impacted by hazardous materials (i.e. puddles, mud, leachate, etc.) should be avoided. Medicine and alcohol can potentiate the effects of exposure to toxic chemicals. Personnel should not take prescribed drugs if the likelihood of such potentiation effects exists. Ingestion of alcohol is prohibited.

7. Equipment Decontamination Procedures: All drilling equipment will be washed prior to arrival at the site. To avoid cross-contamination, all appropriate downhole equipment and sampling equipment will be washed by washing the equipment with an Alconox solution followed by a double rinse with deionized water. Any rinsate generated during field activities will be contained in a United Nations- approved 208-liter (55- gallon) drum.

2.8 Personal Protective Equipment

Level of Protection: A, B, C, D (Modified)

Calibration and maintenance of field sampling equipment procedures are presented on Table 2.

Modifications: Any modifications to level of protection shall be made by the Health and Safety Officer/CIH based on air monitoring results in accordance with Table 3.

X	HardHat	X	Safety Eyewear
X	Safety Toed Boots		Respirator (Type): Standby full-face air purifying respirator
X	Reflective, High Visibility Traffic Vest		Filter Type; organic Vapor and high-efficiency particulate air
X	Hearing Protection	X	Gloves (Type): Latex or nitrile
X	Tyvek Coveralls (if needed)		Other:

Other Emergency/Safetv Equipment:

X	15 Minute Eyewash	X	*NBIC* Fire Extinguisher		Barricades
X	First Aid Kit	X	Potable Water		Traffic Cones

Additional emergency/safety equipment includes pagers and cellular phones, and the use of flashing amber lights on vehicles. Workers are advised to avoid the use of hand-held cellular telephones while operating motor vehicles.

2.9 Training

All personnel on-site will have completed a minimum of 40 hours of training, and an 8-hour refresher as required by 29 Code of Federal Regulations (CFR) 1910.120 and 8 California Code ofRegulations (CCR) 5192.

This includes, but shall not be limited to, first aid/CPR, hearing conservation, respiratory protection, Hazardous Waste Safety Training, Qualified Equipment Operator, Bloodborne Pathogen, PPE, decontamination, hazard recognition, and safe operation procedures.

2.10 Medical Surveillance Requirements

The DDEE Medical Surveillance Program (MSP) requires all personnel on-site to successfully complete a pre-placement or annual physical examination. The physical examination typically includes: medical and occupational history questionnaire, physical examination, complete blood count with differential, liver enzyme profile, chest X-ray (one every three years for non-asbestos workers), pulmonary function test, audiogram, electrocardiogram for persons older than 35 years of age, illegal drug screening, and visual acuity. The MSP will at a minimum meet the requirements of the Occupational Safety and Health Administration (OSHA) regulation 29 CFR 1910.120 (f), medical surveillance programs for hazardous waste operations and emergency response (29 CFR 1910.134 Respiratory Protection and 29 CFR 1910.95 Hearing Conservation). The program shall also comply with Title 8 CCR 5192.

2.11 Emergency Response Plan

DDEE's Emergency Response/Contingency Plan (ER/CR) is designed to define and communicate procedures to be followed in case of an emergency. The ER/CP is consistent with the regulations under 29 CFR 1910.120 (1) (1). It is unlikely that a significant unplanned event (e.g., explosion, fire, etc.) will occur during the field activities included in this scope of work. However, in case of an emergency, the Site Safety Officer shall ensure that all personal working at the site shall know at a minimum the following evacuation procedures:

1. If evacuation is necessary, all personnel will proceed to a predetermined location in the support zone, upwind and upslope (as necessary) of the work zone.

THE SIGNAL FOR EVACUATION WILL BE FOUR SHORT BLASTS IN SUCCESSION ON A CAR HORN.

2. Site-specific evacuation incident procedures will be discussed and documented by the Site Safety Officer.
3. Any person requiring medical attention shall be evacuated promptly from any contaminated area. For personnel requiring medical attention, the emergency information guidelines in Section 3.0 shall be followed.

3.0 Emergency Information

If injuries occur on site, take the following action:

1. Stop work, evacuate any injured personnel, initiate first aid, and implement procedures to limit the extent of the emergency event (ensure response actions do not endanger site personnel).

2. Get medical attention for the injured person immediately, if necessary, from the emergency medical facility. Site Supervisor will notify Health Resources at (925) 698 – 6890, for any injury/illness requiring medical attention beyond first aid.

3. Contact the Site Safety Officer. The Site Supervisor shall complete a Supervisor's Employee Injury Report and forward it to the Area Health and Safety Manager/within 24 hours. The project manager will be notified immediately via phone.

4. The Site Supervisor must complete a DDEE Incident Investigation Report form (Appendix C) and submit it to the Area Health & Safety Manager and the Regulatory Officer within 24 hours.

5. Follow reporting guidelines in the attached flow chart and checklist (Appendix C).

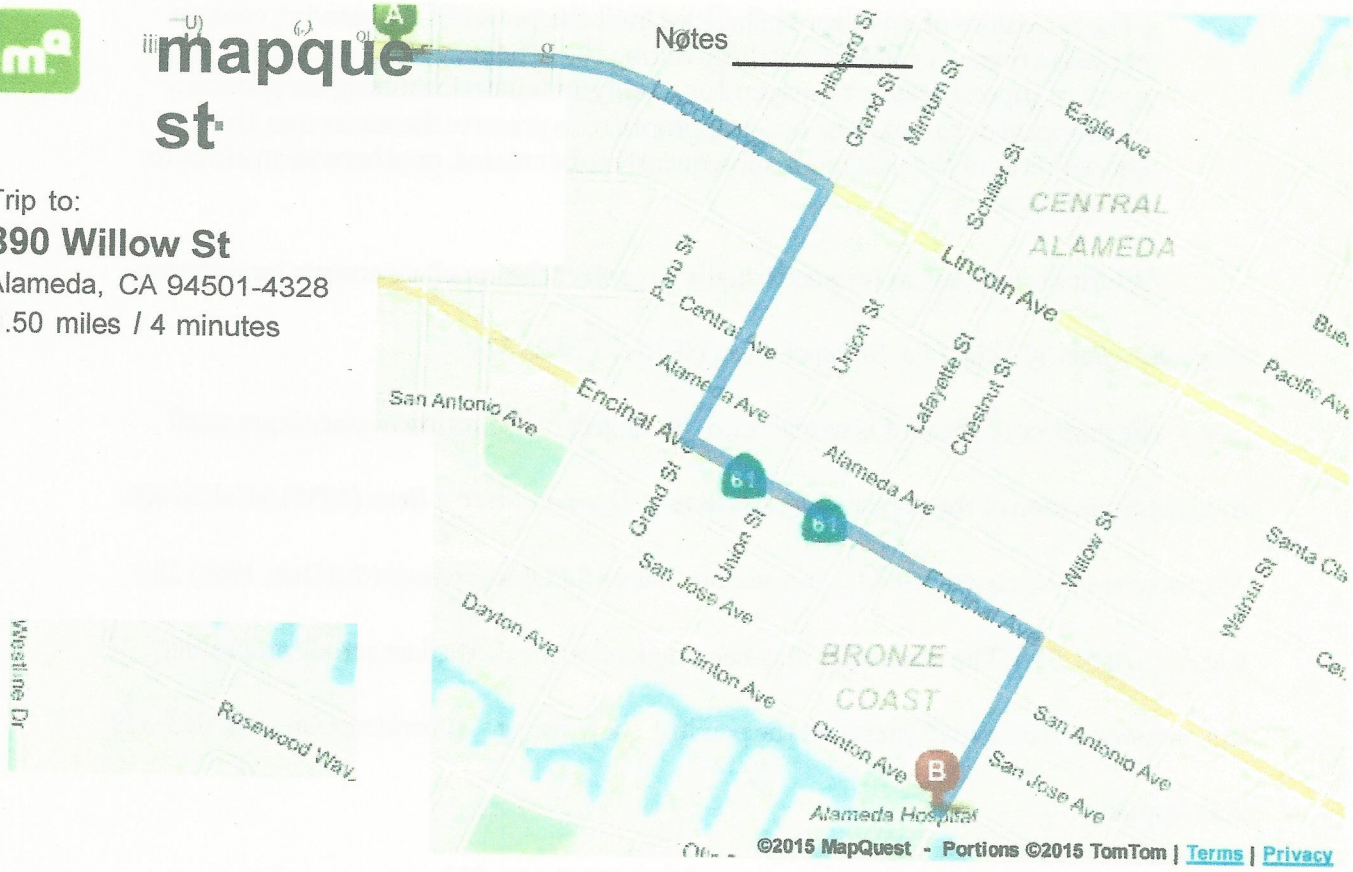
3.1 Nearby Hospital/Clinic

Driving Directions from 1208 Uncoln Ave, Alameda, California 94501 to 890 Willow St. Alameda, California 94501 | MapQuest

Total Travel Estimate: 1.50 miles.about 4 minutes

mapquest

Trip to:
890 Willow St
Alameda, CA 94501-4328
1.50 miles / 4 minutes



1208 Lincoln Ave, Alameda, CA 94501-2326

Download Free App

1. Start out going east on Lincoln Ave toward Sherman St. Map — 0.5Mi
   0.5 Mi Total

2. Turn right onto Grand St. Map — 0.3Mi
   0.8 Mi Total
   Grand St is just *past Hibbard St*
   Grand Market is on the comer
   If you reach Minturn St you've gone a little too far

3. Turn left onto EncinalAve / CA-61. Map — 0.4Mi
   1.3 Mi Tota
   Encinal Ave is just past Alameda Ave
   If you reach San Antonio Ave you've gone a little too far

4. Turn right onto Willow St. Map
Willow St is 0.1 miles past Chestnut St
If you reach Walnut St you've gone about 0.1 miles too far

5. 890 WILLOW ST is on the left. Map
Your destination is just past Clinton Ave
If you reach Otis Dr you've gone about 0.1 miles too
890 Willow St, Alameda, CA 94501-4328

4.0 Health and Safety Plan Approvals and Acknowledgement

4.1 Approvals

I have read and approved this HSP with respect to project hazards, regulatory requirements, and DDEE procedures.

Project Name: Soil and Groundwater Remedial Investigation, 1208 Lincoln Avenue, Alameda. California

David Ade Fagorala Date 8-5-2015
Project Environmental Scientist

Kunbi Oloyede
Kunbi Oloyede
Health and Safety Officer Date 8-4-2015

4.2 Acknowledgments

The final approved version of this HSP has been provided to the Site Safety Officer. I acknowledge my responsibility to provide the Site Safety Officer with the equipment, materials, and qualified personnel to implement fully all safety requirements in this HSP. I will formally review this plan with the health and safety staff every six months until project completion.

H. Ibrahim
Hassan Ibrahim
Project Civil Engineer:
Date: 8-3-2015

I acknowledge receipt of this HSP from the Health and Safety Officer, and that it is my responsibility to explain its contents to all site personnel and cause these requirements to be fully implemented. Any change in conditions, scope of work, or other change that may affect worker safety requires me to notify the Health and Safety Representative.
Site Safety Officer: Kunbi Oloyede Date: 8-4-2015

5.0 Health and Safety Plan Acknowledgement

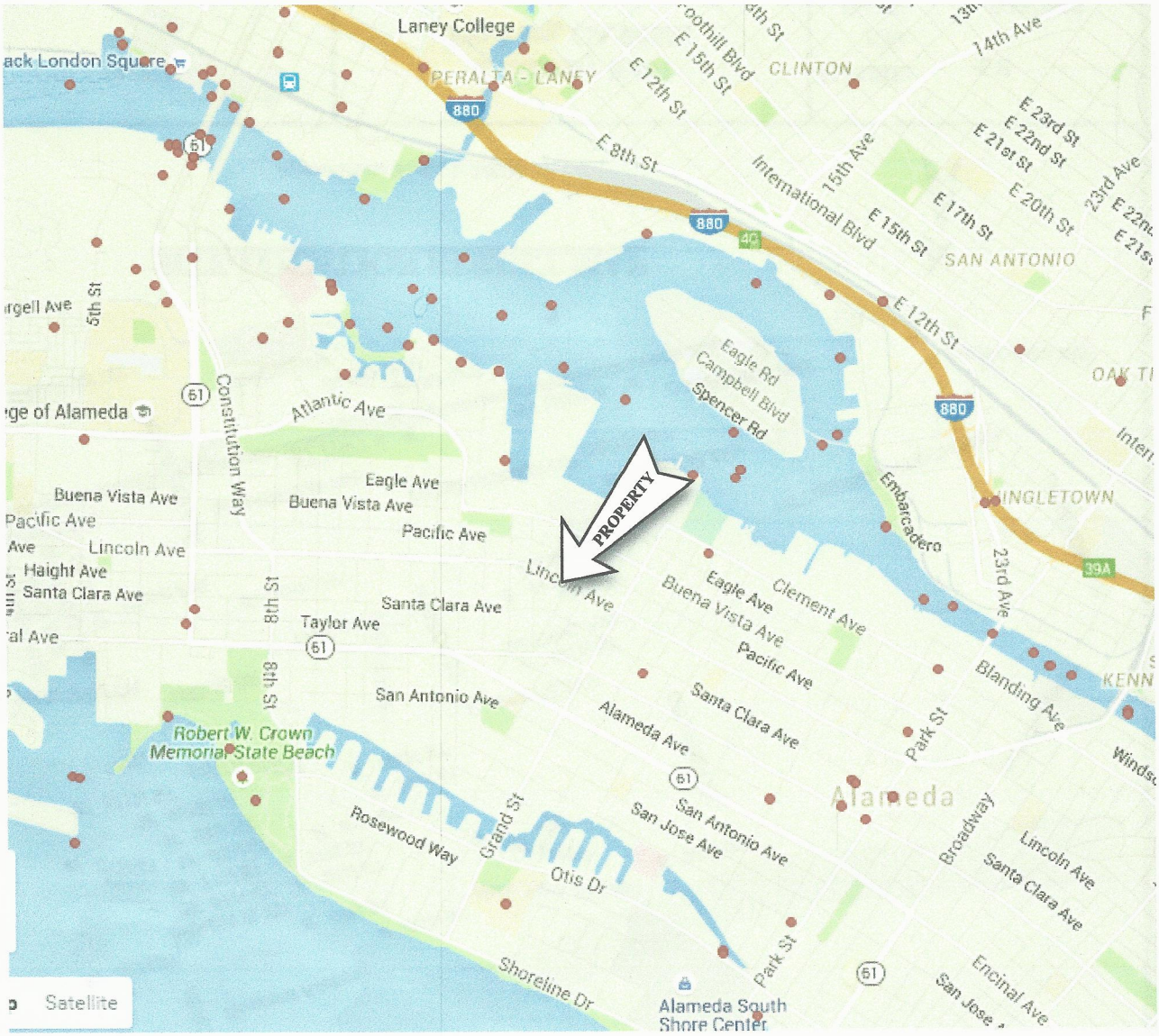
I have read this site-specific health and safety plan, or its contents have been presented to me, and I understand the contents, and agree to abide by its requirements.

Name (Print)	Signature	Representing	Date

FIGURE 1

SITE LOCATION MAP

AND DIRECTION TO NEARBY HOSPITAL MAP

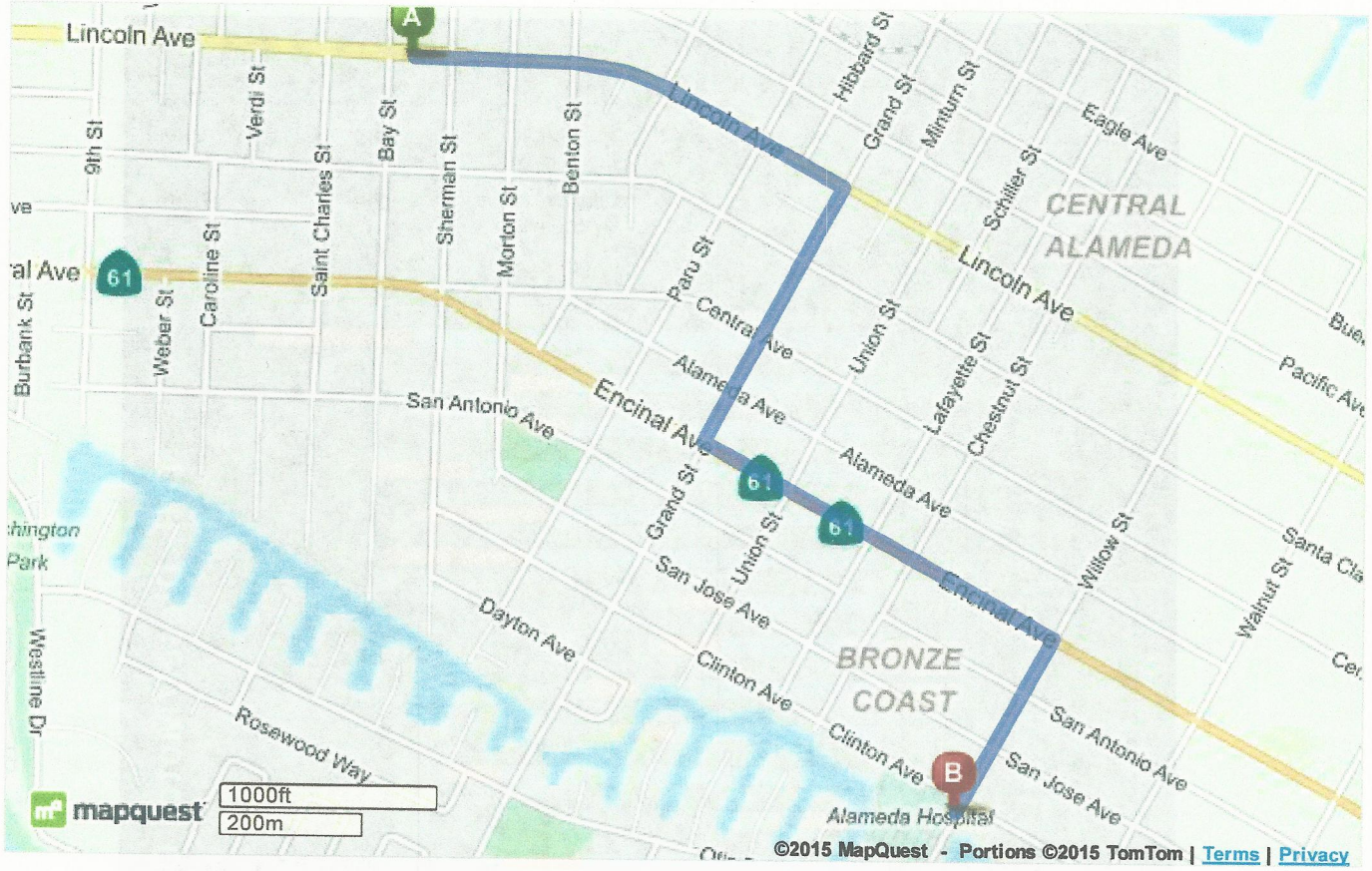


Scale: 1: 24,000

FIGURE 1	Site Location Map
SITE ADDRESS:	**ELEGANT CLEARNER** 1208 Lincoln Avenue, Alameda, CA 94501

Dave Driling Environmental Engineering, Inc.
Water well drillers & Enviromental Engineering Consultants

Total Travel Estimate: **1.50 miles - about 4 minutes**



mapquest

Notes

Trip to:
890 Willow St
Alameda, CA 94501-4328
1.50 miles / 4 minutes

1208 Lincoln Ave, Alameda, CA 94501-2326

Download Free App

1. Start out going **east** on **Lincoln Ave** toward **Sherman St**. Map — **0.5 Mi** / *0.5 Mi Total*

2. Turn **right** onto **Grand St**. Map — **0.3 Mi** / *0.8 Mi Total*
Grand St is just past Hibbard St
Grand Market is on the corner
If you reach Minturn St you've gone a little too far

3. Turn **left** onto **Encinal Ave / CA-61**. Map — **0.4 Mi** / *1.3 Mi Total*
Encinal Ave is just past Alameda Ave
If you reach San Antonio Ave you've gone a little too far

4. Turn **right** onto **Willow St**. Map — **0.2 Mi** / *1.5 Mi Total*
Willow St is 0.1 miles past Chestnut St
If you reach Walnut St you've gone about 0.1 miles too far

5. **890 WILLOW ST** is on the **left**. Map
Your destination is just past Clinton Ave
If you reach Otis Dr you've gone about 0.1 miles too far

890 Willow St, Alameda, CA 94501-4328

FIGURE 2

SITE PLAN AND BORING LOCATIONS

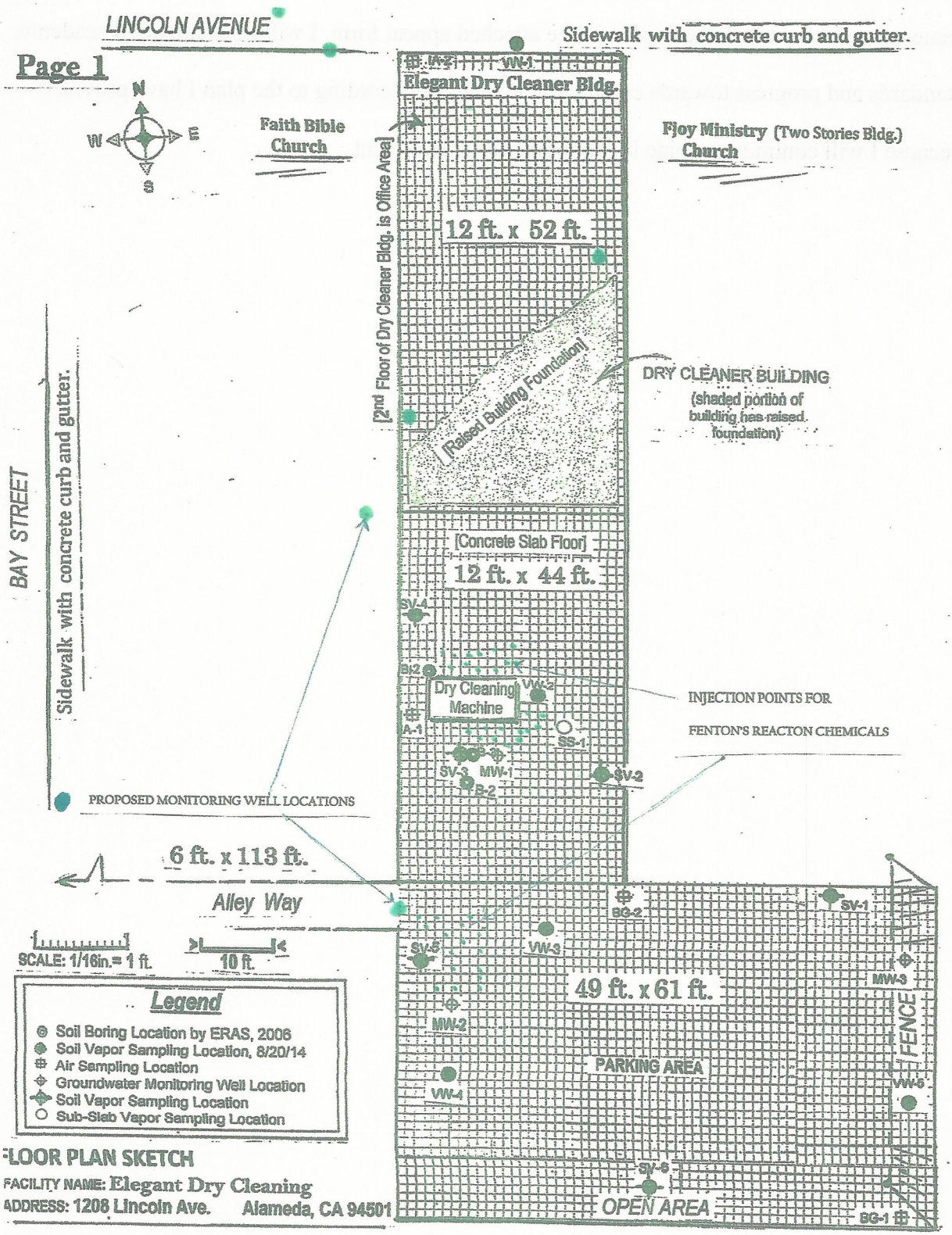

LINCOLN AVENUE
Sidewalk with concrete curb and gutter.
Page 1
N
W
E
S
Faith Bible Church
Fjoy Ministry (Two Stories Bldg.) Church
Elegant Dry Cleaner Bldg.
VW-1
VW-2
12 ft. x 52 ft.
[2nd Floor of Dry Cleaner Bldg. is Office Area]
[Raised Building Foundation]
DRY CLEANER BUILDING
(shaded portion of building has raised foundation)
BAY STREET
Sidewalk with concrete curb and gutter.
[Concrete Slab Floor]
12 ft. x 44 ft.
SV-4
B-2
Dry Cleaning Machine
A-1
SS-1
SV-3
MW-1
B-2
SV-2
INJECTION POINTS FOR
FENTON'S REACTON CHEMICALS
PROPOSED MONITORING WELL LOCATIONS
6 ft. x 113 ft.
Alley Way
SCALE: 1/16in.= 1 ft.
10 ft.
BG-2
SV-1
SV-5
VW-3
MW-3
49 ft. x 61 ft.
MW-2
PARKING AREA
FENCE
VW-4
VW-5
SV-6
OPEN AREA
BG-1
Legend
Soil Boring Location by ERAS, 2006
Soil Vapor Sampling Location, 8/20/14
Air Sampling Location
Groundwater Monitoring Well Location
Soil Vapor Sampling Location
Sub-Slab Vapor Sampling Location
FLOOR PLAN SKETCH
FACILITY NAME: Elegant Dry Cleaning
ADDRESS: 1208 Lincoln Ave. Alameda, CA 94501

TABLE 1

LIST OF REPRESENTATIVE CHEMICALS OF CONCERN

MATERIAL SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT

Product Name: **DF-2000 FLUID**
Product Description: Isoparaffinic Hydrocarbon

Intended Use: Dry cleaning Fluid (see also Section 11)

COMPANY IDENTIFICATION

Supplier: **EXXONMOBIL CHEMICAL COMPANY**
P.O. BOX 3272
HOUSTON, TX. 77253-3272 USA

24 Hour Health Emergency	(800) 726-2015
Transportation Emergency Phone	(800) 424-9300 or (703) 527-3887 CHEMTREC
Product Technical Information	(281) 870-6000/Health & Medical (281) 870-6884
Supplier General Contact	(281) 870-6000

SECTION 2 COMPOSITION / INFORMATION ON INGREDIENTS

Reportable Hazardous Substance(s) or Complex Substance(s)

Name	CAS#	Concentration*
NAPHTHA (PETROLEUM), HYDROTREATED HEAVY	64742-48-9	100%

* All concentrations are percent by weight unless material is a gas. Gas concentrations are in percent by volume.

SECTION 3 HAZARDS IDENTIFICATION

This material is considered to be hazardous according to regulatory guidelines (see (M)SDS Section 15).

POTENTIAL PHYSICAL / CHEMICAL EFFECTS

Combustible. Material can release vapors that readily form flammable mixtures. Vapor accumulation could flash and/or explode if ignited. Material can accumulate static charges which may cause an ignition.

POTENTIAL HEALTH EFFECTS

Repeated exposure may cause skin dryness or cracking. If swallowed, may be aspirated and cause lung damage. May be irritating to the eyes, nose, throat, and lungs.

NFPA Hazard ID:	Health:	1	Flammability:	2	Reactivity:	0
HMIS Hazard ID:	Health:	1	Flammability:	2	Reactivity:	0

NOTE: This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

SECTION 4 FIRST AID MEASURES

INHALATION

Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

SKIN CONTACT

Wash contact areas with soap and water. Remove contaminated clothing. Launder contaminated clothing before reuse.

EYE CONTACT

Flush thoroughly with water. If irritation occurs, get medical assistance.

INGESTION

Seek immediate medical attention. Do not induce vomiting.

NOTE TO PHYSICIAN

If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately.

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

Appropriate Extinguishing Media: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.

Inappropriate Extinguishing Media: Straight Streams of Water

FIRE FIGHTING

Fire Fighting Instructions: Evacuate area. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. Firefighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

Unusual Fire Hazards: Combustible. Hazardous material. Firefighters should consider protective equipment indicated in Section 8.

Hazardous Combustion Products: Smoke, Fume, Incomplete combustion products, Oxides of carbon

FLAMMABILITY PROPERTIES

Flash Point [Method]: >61C (142F) [ASTM D-93]
Flammable Limits (Approximate volume % in air): LEL: 0.7 UEL: 5.3
Autoignition Temperature: 335°C (635°F)

SECTION 6 ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. US regulations require reporting releases of this material to the environment which exceed the

applicable reportable quantity or oil spills which could reach any waterway including intermittent dry creeks. The National Response Center can be reached at (800)424-8802.

PROTECTIVE MEASURES

Avoid contact with spilled material. Warn or evacuate occupants in surrounding and downwind areas if required due to toxicity or flammability of the material. See Section 5 for fire fighting information. See the Hazard Identification Section for Significant Hazards. See Section 4 for First Aid Advice. See Section 8 for Personal Protective Equipment.

SPILL MANAGEMENT

Land Spill: Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do it without risk. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Prevent entry into waterways, sewer, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Use clean non-sparking tools to collect absorbed material. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Large Spills: Water spray may reduce vapor; but may not prevent ignition in closed spaces. Recover by pumping or with suitable absorbent.

Water Spill: Stop leak if you can do it without risk. Eliminate sources of ignition. Warn other shipping. Remove from the surface by skimming or with suitable absorbents. If the Flash Point exceeds the Ambient Temperature by 10 degrees C or more, use containment booms and remove from the surface by skimming or with suitable absorbents when conditions permit. If the Flash Point does not exceed the Ambient Air Temperature by at least 10C, use booms as a barrier to protect shorelines and allow material to evaporate. Seek the advice of a specialist before using dispersants.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

ENVIRONMENTAL PRECAUTIONS

Large Spills: Dike far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

SECTION 7 HANDLING AND STORAGE

HANDLING

Avoid contact with skin. Prevent small spills and leakage to avoid slip hazard. Material can accumulate static charges which may cause an electrical spark (ignition source). When the material is handled in bulk, an electrical spark could ignite any flammable vapors from liquids or residues that may be present (e.g., during switch-loading operations). Use proper bonding and/or ground procedures. However, bonding and grounds may not eliminate the hazard from static accumulation. Consult local applicable standards for guidance. Additional references include American Petroleum Institute 2003 (Protection Against Ignitions Arising out of Static, Lightning and Stray Currents) or National Fire Protection Agency 77 (Recommended Practice on Static Electricity) or CENELEC CLC/TR 50404 (Electrostatics - Code of practice for the avoidance of hazards due to static electricity).

Loading/Unloading Temperature: [Ambient]

Transport Temperature: [Ambient]
Transport Pressure: [Ambient]

Static Accumulator: This material is a static accumulator. A liquid is typically considered a nonconductive, static accumulator if its conductivity is below 100 pS/m (100x10E-12 Siemens per meter) and is considered a semiconductive, static accumulator if its conductivity is below 10,000 pS/m. Whether a liquid is nonconductive or semiconductive, the precautions are the same. A number of factors, for example liquid temperature, presence of contaminants, anti-static additives and filtration can greatly influence the conductivity of a liquid.

STORAGE

The container choice, for example storage vessel, may effect static accumulation and dissipation. Keep container closed. Handle containers with care. Open slowly in order to control possible pressure release. Store in a cool, well-ventilated area. Storage containers should be grounded and bonded. Fixed storage containers, transfer containers and associated equipment should be grounded and bonded to prevent accumulation of static charge.
Storage Temperature: [Ambient]
Storage Pressure: [Ambient]

Suitable Containers/Packing: Tankers; Tank Trucks; Railcars; Barges; Drums
Suitable Materials and Coatings (Chemical Compatibility): Inorganic Zinc Coatings; Epoxy Phenolics; Teflon; Neoprene; Stainless Steel; Carbon Steel
Unsuitable Materials and Coatings: Vinyl Coatings; Natural Rubber; Butyl Rubber; Ethylene-proplyene-diene monomer (EPDM)

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMIT VALUES

Exposure limits/standards (Note: Exposure limits are not additive)

Source	Form	Limit / Standard			NOTE	Source
NAPHTHA (PETROLEUM), HYDROTREATED HEAVY	Vapor.	RCP - TWA	1200 mg/m3	171 ppm	Total Hydrocarbons	ExxonMobil

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

ENGINEERING CONTROLS

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider:
Adequate ventilation should be provided so that exposure limits are not exceeded. Use explosion-proof ventilation equipment.

PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

Respiratory Protection: If engineering controls do not maintain airborne contaminant concentrations at a

level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include:

Half-face filter respirator

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapor warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

Hand Protection: Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:

If prolonged or repeated contact is likely, chemical resistant gloves are recommended. If contact with forearms is likely, wear gauntlet style gloves.

Eye Protection: If contact is likely, safety glasses with side shields are recommended.

Skin and Body Protection: Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include:

If prolonged or repeated contact is likely, chemical, and oil resistant clothing is recommended.

Specific Hygiene Measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

ENVIRONMENTAL CONTROLS

See Sections 6, 7, 12, 13.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Typical physical and chemical properties are given below. Consult the Supplier in Section 1 for additional data.

GENERAL INFORMATION

Physical State: Liquid
Form: Clear
Color: Colorless
Odor: Odorless
Odor Threshold: N/D

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

Relative Density (at 15 C): 0.767
Density (at 15 °C): 769 kg/m³ (6.42 lbs/gal, 0.77 kg/dm³)
Flash Point [Method]: >61C (142F) [ASTM D-93]
Flammable Limits (Approximate volume % in air): LEL: 0.7 UEL: 5.3
Autoignition Temperature: 335°C (635°F)
Boiling Point / Range: 185C (365F) - 211C (412F)
Vapor Density (Air = 1): 5.6 at 101 kPa

Vapor Pressure: 0.064 kPa (0.48 mm Hg) at 20 C | 0.13 kPa (0.98 mm Hg) at 38C | 0.28 kPa (2.1 mm Hg) at 50C
Evaporation Rate (n-butyl acetate = 1): < 0.1
pH: N/A
Log Pow (n-Octanol/Water Partition Coefficient): N/D
Solubility in Water: Negligible
Viscosity: 1.55 cSt (1.55 mm2/sec) at 40 C | 1.99 cSt (1.99 mm2/sec) at 25C
Oxidizing Properties: See Hazards Identification Section.

OTHER INFORMATION

Freezing Point: N/D
Melting Point: N/A
Pour Point: -57°C (-71°F)
Molecular Weight: 163
Hygroscopic: No
Coefficient of Thermal Expansion: 0.00078 V/VDEGC

SECTION 10 STABILITY AND REACTIVITY

STABILITY: Material is stable under normal conditions.

CONDITIONS TO AVOID: Avoid heat, sparks, open flames and other ignition sources.

MATERIALS TO AVOID: Strong oxidizers

HAZARDOUS DECOMPOSITION PRODUCTS: Material does not decompose at ambient temperatures.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Route of Exposure	Conclusion / Remarks
Inhalation	
Toxicity: Data available.	Minimally Toxic. Based on test data for the material.
Irritation: Data available.	Negligible hazard at ambient/normal handling temperatures. Based on test data for structurally similar materials.
Ingestion	
Toxicity: LD50 > 10000 mg/kg	Minimally Toxic. Based on test data for the material.
Skin	
Toxicity: LD50 > 3160 mg/kg	Minimally Toxic. Based on test data for the material.
Irritation: Data available.	Mildly irritating to skin with prolonged exposure. Based on test data for the material.
Eye	
Irritation: Data available.	May cause mild, short-lasting discomfort to eyes. Based on test data for the material.

CHRONIC/OTHER EFFECTS

For the product itself:

Vapor/aerosol concentrations above recommended exposure levels are irritating to the eyes and respiratory

tract, may cause headaches, dizziness, anesthesia, drowsiness, unconsciousness and other central nervous system effects including death.
Prolonged and/or repeated skin contact with low viscosity materials may defat the skin resulting in possible irritation and dermatitis.
Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema. Care must be taken to ensure garments cleaned with solvents are completely dry before being worn. Drycleaning solvent not totally removed from adsorbent clothing (e.g., shoulder pads, waist bands, etc.) that remains in contact with the skin for prolonged periods may cause skin irritation including redness, swelling and possibly blistering.

Additional information is available by request.

The following ingredients are cited on the lists below: None.

--REGULATORY LISTS SEARCHED--

1 = NTP CARC	3 = IARC 1	5 = IARC 2B
2 = NTP SUS	4 = IARC 2A	6 = OSHA CARC

SECTION 12 ECOLOGICAL INFORMATION

The information given is based on data available for the material, the components of the material, and similar materials.

ECOTOXICITY

Material -- Not expected to be harmful to aquatic organisms.
Material -- Not expected to demonstrate chronic toxicity to aquatic organisms.

PERSISTENCE AND DEGRADABILITY

Biodegradation:

Material -- Expected to be readily biodegradable.

Hydrolysis:

Material -- Transformation due to hydrolysis not expected to be significant.

Photolysis:

Material -- Transformation due to photolysis not expected to be significant.

Atmospheric Oxidation:

Material -- Expected to degrade rapidly in air

OTHER ECOLOGICAL INFORMATION

VOC (EPA Method 24): 6.401 lbs/gal

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

DISPOSAL RECOMMENDATIONS

Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised

incineration at very high temperatures to prevent formation of undesirable combustion products.

REGULATORY DISPOSAL INFORMATION

RCRA Information: The unused product, in our opinion, is not specifically listed by the EPA as a hazardous waste (40 CFR, Part 261D), nor is it formulated to contain materials which are listed as hazardous wastes. It does not exhibit the hazardous characteristics of ignitability, corrositivity or reactivity and is not formulated with contaminants as determined by the Toxicity Characteristic Leaching Procedure (TCLP). However, used product may be regulated.

Empty Container Warning Empty Container Warning (where applicable): Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

SECTION 14 TRANSPORT INFORMATION

LAND (DOT)

Proper Shipping Name: PETROLEUM DISTILLATES, N.O.S.
Hazard Class & Division: COMBUSTIBLE LIQUID
ID Number: 1268
Packing Group: III
ERG Number: 128
Label(s): NONE
Transport Document Name: UN1268, PETROLEUM DISTILLATES, N.O.S., COMBUSTIBLE LIQUID, PG III

Footnote: This material is not regulated under 49 CFR in a container of 119 gallon capacity or less when transported solely by land, as long as the material is not a hazardous waste, a marine pollutant, or specifically listed as a hazardous substance.

LAND (TDG): Not Regulated for Land Transport

SEA (IMDG): Not Regulated for Sea Transport according to IMDG-Code

AIR (IATA): Not Regulated for Air Transport

SECTION 15 REGULATORY INFORMATION

OSHA HAZARD COMMUNICATION STANDARD: When used for its intended purpose, this material is classified as hazardous in accordance with OSHA 29CFR 1910.1200.

NATIONAL CHEMICAL INVENTORY LISTING: AICS, IECSC, DSL, EINECS, ENCS, KECI, PICCS, TSCA

EPCRA: This material contains no extremely hazardous substances.

CERCLA: This material is not subject to any special reporting under the requirements of the Comprehensive

the Flash Point does not exceed the Ambient Air Temperature by at least 10C, use booms as a barrier to protect shorelines and allow material to evaporate. Seek the advice of a specialist before using dispersants.

The information and recommendations contained herein are, to the best of ExxonMobil's knowledge and belief, accurate and reliable as of the date issued. You can contact ExxonMobil to insure that this document is the most current available from ExxonMobil. The information and recommendations are offered for the user's consideration and examination. It is the user's responsibility to satisfy itself that the product is suitable for the intended use. If buyer repackages this product, it is the user's responsibility to insure proper health, safety and other necessary information is included with and/or on the container. Appropriate warnings and safe-handling procedures should be provided to handlers and users. Alteration of this document is strictly prohibited. Except to the extent required by law, re-publication or retransmission of this document, in whole or in part, is not permitted. The term, "ExxonMobil" is used for convenience, and may include any one or more of ExxonMobil Chemical Company, Exxon Mobil Corporation, or any affiliates in which they directly or indirectly hold any interest.

Internal Use Only
MHC: 1A, 0, 0, 0, 2, 0

DGN: 4400292HUS (1013425)

SAFETY DATA SHEET

Version 5.2
Revision Date 11/18/2014
Print Date 01/15/2015

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name : Trichloroethylene

Product Number : 133124
Brand : Aldrich
Index-No. : 602-027-00-9

CAS-No. : 79-01-6

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA

Telephone : +1 800-325-5832
Fax : +1 800-325-5052

1.4 Emergency telephone number

Emergency Phone # : (314) 776-6555

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Skin irritation (Category 2), H315
Eye irritation (Category 2A), H319
Germ cell mutagenicity (Category 2), H341
Carcinogenicity (Category 1B), H350
Specific target organ toxicity - single exposure (Category 3), Central nervous system, H336
Acute aquatic toxicity (Category 3), H402
Chronic aquatic toxicity (Category 3), H412

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal word Danger

Hazard statement(s)
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H341 Suspected of causing genetic defects.
H350 May cause cancer.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statement(s)	
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P261	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264	Wash skin thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear eye protection/ face protection.
P280	Wear protective gloves.
P281	Use personal protective equipment as required.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 + P312	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P332 + P313	If skin irritation occurs: Get medical advice/ attention.
P337 + P313	If eye irritation persists: Get medical advice/ attention.
P362	Take off contaminated clothing and wash before reuse.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Synonyms	:	TCE Trichloroethene
Formula	:	C_2HCl_3
Molecular weight	:	131.39 g/mol
CAS-No.	:	79-01-6
EC-No.	:	201-167-4
Index-No.	:	602-027-00-9

Hazardous components

Component	Classification	Concentration
Trichloroethylene Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)		
	Skin Irrit. 2; Eye Irrit. 2A; Muta. 2; Carc. 1B; STOT SE 3; Aquatic Acute 3; Aquatic Chronic 3; H315, H319, H336, H341, H350, H412	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
No data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
Carbon oxides, Hydrogen chloride gas

5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information
No data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.
For personal protection see section 8.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up
Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Light sensitive. Handle and store under inert gas.
Storage class (TRGS 510): Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
Trichloroethylene	79-01-6	TWA	10 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Central Nervous System impairment cognitive decrement Renal toxicity Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Suspected human carcinogen		
		STEL	25 ppm	USA. ACGIH Threshold Limit Values (TLV)
		Central Nervous System impairment cognitive decrement Renal toxicity Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Suspected human carcinogen		
		Potential Occupational Carcinogen See Appendix C See Appendix A		
		See Table Z-2		
		TWA	100 ppm	USA. Occupational Exposure Limits (OSHA) - Table Z-2
		Z37.19-1967		
		CEIL	200 ppm	USA. Occupational Exposure Limits (OSHA) - Table Z-2
		Z37.19-1967		
		Peak	300 ppm	USA. Occupational Exposure Limits (OSHA) - Table Z-2
		Z37.19-1967		
		TWA	50 ppm 270 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		Skin notation		
		STEL	200 ppm 1,080 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		Skin notation		

Biological occupational exposure limits

Component	CAS-No.	Parameters	Value	Biological specimen	Basis
Trichloroethylene	79-01-6	Trichloroacetic acid	15.0000 mg/l	Urine	ACGIH - Biological Exposure Indices (BEI)
	Remarks	End of shift at end of workweek			
		Trichloroethanol	0.5000 mg/l	In blood	ACGIH - Biological Exposure Indices (BEI)
		End of shift at end of workweek			
		Trichloroethylene		In blood	ACGIH - Biological Exposure Indices (BEI)
		End of shift at end of workweek			
		Trichloroethylene		In end-exhaled air	ACGIH - Biological Exposure Indices (BEI)
		End of shift at end of workweek			

8.2 Exposure controls

Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection
Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact
Material: Fluorinated rubber
Minimum layer thickness: 0.7 mm
Break through time: 480 min
Material tested:Vitoject® (KCL 890 / Aldrich Z677698, Size M)

Splash contact
Material: Fluorinated rubber
Minimum layer thickness: 0.7 mm
Break through time: 480 min
Material tested:Vitoject® (KCL 890 / Aldrich Z677698, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection
Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a)	Appearance	Form: liquid, clear Colour: colourless
b)	Odour	No data available
c)	Odour Threshold	No data available
d)	pH	No data available
e)	Melting point/freezing point	Melting point/range: -84.8 °C (-120.6 °F) - lit.
f)	Initial boiling point and boiling range	86.7 °C (188.1 °F) - lit.
g)	Flash point	No data available

Dave Drilling Environmental Engineering, Inc.
Water well drillers & Enviromental Engineering Consultants
2283 Willow Avenue, Bay Point, CA 94565. Phone: (510) 258-5167 Website: www.ddfagela.com Email: fagela@outlook.com

SIGNATURE PAGE

LIMITATIONS

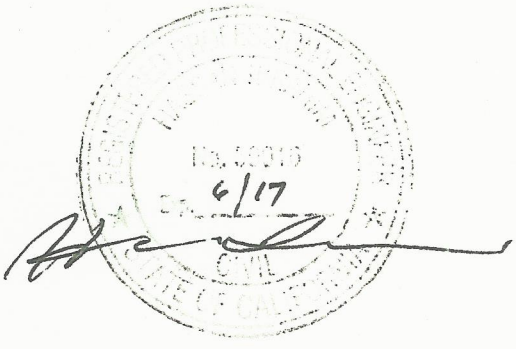
This report describes the methodology for the engineering work (i.e.; Site Investigation, Remedial Investigation, Remedial Action, Remedial Action plan, Geotechnical, Environmental, Drilling, Soil and Groundwater samplings) at the subject facility. The report has been reviewed by a registered civil Engineer in State of California, his signature and licence appears below.

DDEE will focus on locating the most significant sources or potential sources and plume size and migration pathway and implement soil and groundwater remediation. DDEE will conclude a clean-up and /or monitoring program until the concentrations of the contaminant of concern will reach acceptable clean-up levels to the agencies.

DDEE's liability to our Clients for injury or damages to persons or property arising out of work performed for our Clients and for which legal liability may be found to rest upon DDEE, other than for professional errors and omissions, will be limited to its general liability insurance coverage maximum limit.

For any damage on account of any error, omission, or other professional negligence, DDEE's liability will be limited to a sum not to exceed our fees.

The Client shall indemnify DDEE against any claims or costs, which exceed the limitation on DDEE's liability provided in our insurance coverage, or results from acts or omissions of the Client.



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STATEMENT OF LIMITATIONS AND PROFESSIONAL CERTIFICATION

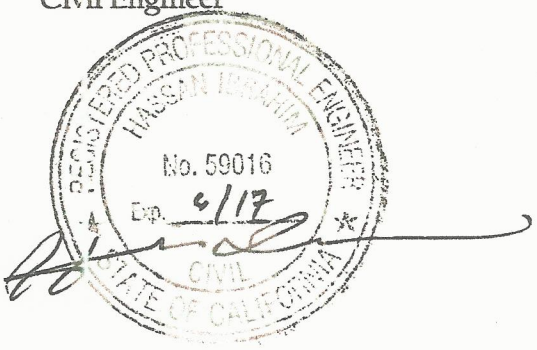
The information provided in this technical report, prepared by DDEE, is intended exclusively for the use of DDEE and Regulatory Agencies for the evaluation of subsurface conditions regarding the subject site. The professional services provided have been performed in accordance with practices generally accepted by other environmental professionals practicing in the environmental engineering field. No other warranty, either expressed or implied is made. As with all subsurface investigations, there is no guarantee that the work conducted will identify all sources of locations of contamination.

DDEE reserves the right to deviate from the proposed scope of services outlined in this Workplan as needed to obtain the required information. If such deviation is necessary, DDEE will seek prior approval from the regulatory agency overseeing this project.

This Proposal is issued for review and consideration for approval by the appropriate regulatory agency. This Proposal has been reviewed by a geologist/engineer who is registered in the state of California and whose signature and license number appears below.

Hassan Ibrahim, PE.

Civil Engineer



David A Fagorala

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