



REFINING CO.
Route 3, Box 7
Gallup, New Mexico 87301
Phone: 505/722-3833
FAX: 505/722-0210

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NMDD000333211-2

Table 4A. Modified Skimmer List 8240 Volatile Organics

Not adjusted for soil matrix

Parameter	EPA Method SW-846	Description	Containers	Preservative	Holding Time/Days	Liquid Detection Limit (µg/L)	Soil Detection Limit (µg/kg)
Benzene	8240	GC/MS	G Glass	4°C	14	5.0	5.0
2-Butanone (MEK)	8240	GC/MS	G Glass	4°C	14	100.0	100.0
Carbon Disulfide	8240	GC/MS	G Glass	4°C	14	100.0	100.0
Chlorobenzene	8240	GC/MS	G Glass	4°C	14	5.0	5.0
Chloroform	8240	GC/MS	G Glass	4°C	14	5.0	5.0
Chloromethane	8240	GC/MS	G Glass	4°C	14	10.0	10.0
1,1 Dichloroethane	8240	GC/MS	G Glass	4°C	14	5.0	5.0
1,2 Dichloroethane	8240	GC/MS	G Glass	4°C	14	5.0	5.0
1,1 Dichloroethene	8240	GC/MS	G Glass	4°C	14	5.0	5.0
trans-1,2-Dichloroethene	8240	GC/MS	G Glass	4°C	14	5.0	5.0
1,4-Dioxane	8240	GC/MS	G Glass	4°C	14	5.0	5.0
Ethylbenzene	8240	GC/MS	G Glass	4°C	14	5.0	5.0
Methylene Chloride	8240	GC/MS	G Glass	4°C	14	5.0	5.0
Styrene	8240	GC/MS	G Glass	4°C	14	5.0	5.0
1,1,2,2-Tetrachloroethane ^b	8240	GC/MS	G Glass	4°C	14	5.0	5.0
Tetrachloroethene ^b	8240	GC/MS	G Glass	4°C	14	5.0	5.0
Toluene	8240	GC/MS	G Glass	4°C	14	5.0	5.0

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Antended Closure Plan
Giant Refining Company
July 1996

Table 4A. Modified Skinner List 8240 Volatile Organics (Concluded)

Parameter	EPA Method SW-846	Description	Containers	Preservative	Holding Time/Days	Liquid Detection Limit (µg/L)	Soil Detection Limit (µg/kg)
1,1,1-Trichloroethane	8240	GC/MS	G Glass	4°C	14	5.0	5.0
Trichloroethene	8240	GC/MS	G Glass	4°C	14	5.0	5.0
Xylene	8240	GC/MS	G Glass	4°C	14	5.0	5.0
Ethylene Dibromide ^b	8240	GC/MS	G Glass	4°C	14	5.0	5.0
Acetone	8240	GC/MS	G Glass	4°C	14	100.0	100.0

^aSW-846 detection limits not established.

^bAdditional constituents.

µg/L = microgram per liter

µg/kg = microgram per kilogram

GC/MS = gas chromatography/mass spectrometry

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Table 4B. Modified Skinner List 8270 Semivolatile Organics

Parameter	EPA Method SW-846	Description	Container	Preservative	Holding Time/Days	Liquid Detection Limit (µg/L)	Soil Detection Limit (µg/kg)
Anthracene	8270	GC/MS	G Glass	4°C	14	10.0	660.0
Benzo(a)Anthracene	8270	GC/MS	G Glass	4°C	14	10.0	660.0
Benzo(b)Fluoranthene	8270	GC/MS	G Glass	4°C	14	10.0	660.0
Benzo(k)Fluoranthene	8270	GC/MS	G Glass	4°C	14	10.0	660.0
Benzo(a)Pyrene	8270	GC/MS	G Glass	4°C	14	10.0	660.0
Butyl Benzyl Phthalate	8270	GC/MS	G Glass	4°C	14	10.0	660.0
Chrysene	8270	GC/MS	G Glass	4°C	14	10.0	660.0
Dibenz(a,h)Anthracene	8270	GC/MS	G Glass	4°C	14	10.0	660.0
Diethyl Phthalate	8270	GC/MS	G Glass	4°C	14	10.0	660.0
7,12-Dimethylbenz(a)-Anthracene	8270	GC/MS	G Glass	4°C	14	10.0	660.0
Dimethyl Phthalate	8270	GC/MS	G Glass	4°C	14	10.0	660.0
Di-n-Octyl Phthalate	8270	GC/MS	G Glass	4°C	14	10.0	660.0
Fluoranthene	8270	GC/MS	G Glass	4°C	14	10.0	660.0
Indeno(1,2,3-cd)Pyrene	8270	GC/MS	G Glass	4°C	14	10.0	660.0
2-Methylnaphthalene	8270	GC/MS	G Glass	4°C	14	10.0	660.0
2-Methylphenol (Cresol)	8270	GC/MS	G Glass	4°C	14	10.0	660.0
3/4-Methylphenol (Cresol)	8270	GC/MS	G Glass	4°C	14	10.0	660.0
Naphthalene	8270	GC/MS	G Glass	4°C	14	10.0	660.0
4-Nitrophenol	8270	GC/MS	G Glass	4°C	14	50.0	3300.0
Phenanthrene	8270	GC/MS	G Glass	4°C	14	10.0	660.0
Pyrene	8270	GC/MS	G Glass	4°C	14	10.0	660.0

Adjusted for soil matrix

Table 4B. Modified Skinner List 8270 Semivolatile Organics (Concluded)

Parameter	EPA Method SW-846	Description	Container	Preservative	Holding Time/Days	Liquid Detection Limit (µg/L)	Soil Detection Limit (µg/kg)
Pyridine	8270	GC/MS	G Glass	4°C	14	*	*
Quinoline	8270	GC/MS	G Glass	4°C	14	*	*
Benzenethiole	8270	GC/MS	G Glass	4°C	14	20.0	*
Phenol	8270	GC/MS	G Glass	4°C	14	10.0	660.0
Bis(2-Ethylhexyl)phthalate ^b	8270	GC/MS	G Glass	4°C	14	2.5	1675.0
Dibenz(a,j)acridine ^b	8270	GC/MS	G Glass	4°C	14	10.0	*
Dibenz(a,h)-anthracene	8270	GC/MS	G Glass	4°C	14	10.0	660.0
Dichlorobenzene ^b	8270	GC/MS	G Glass	4°C	14	10.0	660.0
Methyl Naphthalene	8270	GC/MS	G Glass	4°C	14	10.0	660.0
2,4-Dimethylphenol	8270	GC/MS	G Glass	4°C	14	10.0	660.0
2,4-Dinitrophenol ^b	8270	GC/MS	G Glass	4°C	14	50.0	3300.0
Indene ^c	-	-	-	-	-	-	-
Benzo(j)fluoranthene	8270	GC/MS	G Glass	4°C	14	*	*
2-Chlorophenol	8270	GC/MS	G Glass	4°C	14	10.0	660.0
2,4,6-Trichlorophenol	8270	GC/MS	G Glass	4°C	14	10.0	660.0
Di-n-Butyl Phthalate	8270	GC/MS	G Glass	4°C	14	*	*
Benzyl Alcohol ^b	8270	GC/MS	G Glass	4°C	14	20.0	1300.0
Methyl Chrysene	8270	GC/MS	G Glass	4°C	14	10.0	660.0

*SW-846 detection limits not established.

^bAdditional comment.

^cUse a non-SW-846 method to analyze for indene because there is no established SW-846 method.

µg/L = microgram per liter

µg/kg = microgram per kilogram

GC/MS = gas chromatography/mass spectrometry

Table 4C. Modified Skinner List ICP 6010 Metals

Parameter	EPA Method SW-846	Description	Container	Preservative	Holding Time/Days	Liquid Detection Limit ($\mu\text{g/L}$)	Soil Detection Limit ($\mu\text{g/kg}$)
Antimony	6010	ICP-AES	Glass	4°C	180	32.0	"
Arsenic	6010	ICP-AES	Glass	4°C	180	53.0	"
Barium	6010	ICP-AES	Glass	4°C	180	2.0	"
Beryllium	6010	ICP-AES	Glass	4°C	180	0.3	"
Cadmium	6010	ICP-AES	Glass	4°C	180	4.0	"
Chromium	6010	ICP-AES	Glass	4°C	180	7.0	"
Cobalt	6010	ICP-AES	Glass	4°C	180	7.0	"
Lead	6010	ICP-AES	Glass	4°C	180	42.0	"
Nickel	6010	ICP-AES	Glass	4°C	180	15.0	"
Selenium	6010	ICP-AES	Glass	4°C	180	75.0	"
Vanadium	6010	ICP-AES	Glass	4°C	180	8.0	"

^aDetection limits for soil samples are dependent on matrices and individual instrument performance.

$\mu\text{g/L}$ = microgram per liter

$\mu\text{g/kg}$ = microgram per kilogram

ICP-AES = inductively coupled plasma-atomic emission spectroscopy

Table 4D. Modified Skinner List CVAA 7471 Mercury

Parameter	EPA Method SW-846	Description	Container	Preservative	Holding Time/Days	Liquid Detection Limit (µg/L)	Soil Detection Limit (µg/kg)
Mercury	7471	CVAA	Glass	4°C	28	0.2	0.2

µg/L = microgram per liter
 µg/kg = microgram per kilogram
 CVAA = cold vapor atomic absorption