P.O. Box 1980, Hobbs, NM
District II
P.O. Drawer DD, Artesia, NM 88211
District III
1000 Rio Brazos Rd, Aztec, NM 87410

Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

APPROPRIATE DISTRICT OFFICE AND 1 COPY TO SANTA FE OFFICE

(Revised 3/9/94)

Bonnie Ford
DEPUTY OIL & GAS INSPECTOR

JUN 16 1997

Approved

PIT REMEDIATION AND CLOSURE REPORT

Operator: D.J. Simmons Company, LTD. Telephone: 505-326-3753

Address: 3005 Northridge Dr., Suite L., Farmington, NM 87401

Facility Or: Simmons S-1A
Well Name

Location: Unit or Qtr/Qtr Sec___P_____ Sec_25_ T29-N R-9-W County San Juan

Pit Type: Separator____ Dehydrator_X__ Other_____

Land Type: BLM_X__, State____, Fee____, Other_____

Pit Location: (Attach diagram)
Pit dimensions: length___25'_____, width____25'____, depth____5'_____

Reference: wellhead__X__, other_____

Footage from reference: ___78 feet_____

Direction from reference: __75__ Degrees ___X_ East North _X___ of _____ West South _____

Depth To Ground Water: (Vertical distance from contaminants to seasonal high water elevation of ground water)	Less than 50 feet	(20 points)
	50 feet to 99 feet	(10 points)
	Greater than 100 feet	(0 points) __0___
Wellhead Protection Area: (Less than 200 feet from a private domestic water source, or; less than 1000 feet from all other water sources)	Yes	(20 points)
	No	(0 points) ___0__
Distance To Surface Water: (Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)	Less than 200 feet	(20 points)
	200 feet to 1000 feet	(10 points)
	Greater than 1000 feet	(0 points) __0___
	RANKING SCORE (TOTAL POINTS):	__0__

RECEIVED
DEC 30 1996
OIL CON. DIV.
DIST. 3

Date Remediation Started: December 6, 1996 Date Completed: December 6, 1996

Remediation Method: (Check all appropriate sections) Excavation __X___ Approx. cubic yards 112

Landfarmed _____ Insitu Bioremediation _____

other _____

_____

Remediation Location: (ie. landfarmed onsite, name and location of offsite facility) Onsite _X___ offsite _____

_____

General Description Of Remedial Action: Took original samples for TPH & BTEX from a 5 point composite on November 13, 1996 (see attached). PID for this composite was 2171 PPM. Excavated pit on 12-6-96 and mixed with clean soil until a PID of 478 was reached. Took 5 point composite from the bed rock at 7 feet. This had a PID of 2400 PPM. TPH of the bedrock sample was 1170 PPM. with a BTEX of 65 PPM (see attached). Treated soil was replaced into the pit with the above mentioned PID of 478. Laboratory analyses showed a "treated soil" TPH of 288 PPM & a BTEX of 3.8 PPM. The original samples taken on Nov. 13, 1996 were taken at a depth of 12 inches and the laboratory analyses were 206 PPM for BTEX & 13,350 for TPH. Risk assessment report is attached.

Ground Water Encountered: No _X__ Yes ____ Depth _____

Final Pit: Closure Sampling: (if multiple samples, attach sample results and diagram of sample locations and depths)

Sample location 5 Point Composite of Treated Soil

Original pit sample analyses attached

Sample depth 7 feet _

Sample date December 6, 1996 Sample time 1300 Hrs

Sample Results

Benzene (ppm) _____.011 PPM__

Total BTEX (ppm) ____3.8 PPM____

Field headspace (ppm) _____478 _____

TPH ___288 PPM____

Ground Water Sample: Yes ____ No _X__ (If yes, attach sample results)

I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF

DATE 12/30/96

SIGNATURE Robert L. Crabb PRINTED NAME Robert Crabb/On Site Technologies AND TITLE Agent for D.J. Simmons Company, LTD.

(OCD DOC)

SITE SPECIFIC RISK ASSESSMENT SUMMARY

Well Name:	Simmons S-1A
Well Site Location:	Unit P, Sec 25, T29N, R9W
Pit Type:	Dehy Pit
Producing Formation:	Mesa Verde

Conclusion/ Recommendation:
Based upon the information given and risk assessment, we conclude that the residual soil hydrocarbon contamination resulting from the subject earthen pit is very limited and the subsurface conditions (i.e. bedrock) are enough of a barrier to subdue impact to ground water which would create a significant risk to public health and/or the environment. ***Recommend the closure of this pit location.***

Pit Assessment:

Ranking Score:	0
Horizontal Distance to Surface Water:	>1000 ft.
Ground Water Depth:	>100 ft.
Lateral Extent of Contamination:	18 ft by 24 ft
Vertical Extent of Contamination:	7 ft. (Bedrock: San Jose Formation)
Land Use:	BLM rangeland and grazing
Ground Water Impact:	None Identified
Surface Water Impact:	None Identified
Comments:	Hit Bed Rock at 7 feet

Field and Lab Soil Sample Results:

Sample Location	TPH (ppm)	PID (units)	Benzene (ppm)	Toluene (ppm)	Ethyl-benzene (ppm)	Total Xylene (ppm)
5 Point Composite Nov. 13, 1996 12"	13,350	2400	6	45.6	11.6	143
5 Point Composite of Bedrock 7'	1170	2400	.3	13.2	5.5	46.4
5 Point Composite (Treated Soil)	288	478 .	.01	.7	.2	2.8

Notes:
TPH: Total Petroleum Hydrocarbons per EPA Method 8015A mod.
PID: Results of field headspace testing.
BTEX: Volatile Organic Hydrocarbons per EPA Method 8020.
ppm: Parts per Million, equivalent to mg/Kg.

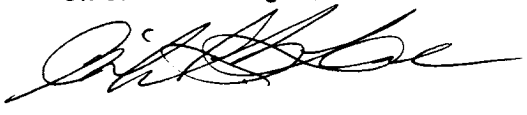
Remediation Summary:
Soil Remediation: November 13, 1996; took 5 point composite from each corner of the pit & center from 12" deep for BTEX (8020) & TPH (8015). PID was >2171 PPM.. Began excavating pit on December 6, 1996. Excavated 112 cu/yd from a 24' by 18' and 7 feet deep. Aerated soil and mixed with clean soil until a PID reading of 478 was reached. Replaced treated soil into excavated pit.

Human Health Risk Assessment:

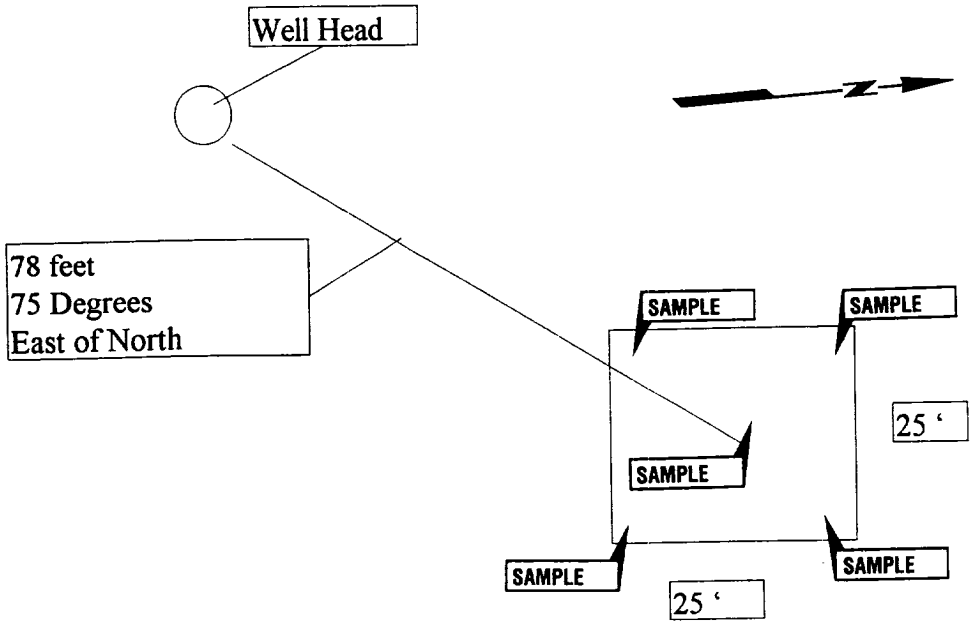
Method:	API Decision Support Software
Soil Model:	SESOIL (Two layers)
Ground Water Model:	AT123 Worst Case Scenario: Well 100 ft down-gradient
Receptor:	Residential Well 100 ft down-gradient. Adult population.
Route(s) of Exposure	Drinking, Shower Inhalation & Skin Contact

Health Concern	Cumulative Risk (All Exposure Routes & Chemicals of Concern)	Human Health Risk Action Level
Carcinogenic Risk	$<1 X10^{-15}$	$1 X10^{-5}$
Hazard Index	$<1 X10^{-10}$	1.0

Submitted by:
Michael K. Lane, P.E.
On Site Technologies, Ltd.



On Site Project: 4-1318



D.J. Simmons S-1A, Dehy Pit, Unit P, Section 25 T-29-N, R-9-W
San Juan County, New Mexico

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

TPH - Gasoline / Diesel Range Organics

Attn:	*Bob Crabb*	Date:	10-Dec-96
Company:	*On Site Technologies, Ltd.*	*COC No.:*	*6226*
Address:	*612 E. Murray Drive*	*Sample No.*	*13129*
City, State:	*Farmington, NM 87401*	*Job No.*	*4-1318*

Project Name:	***D.J. Simmons - Simmons S-1A***				
Project Location:	***Bed Rock***				
Sampled by:	RLC	Date:	6-Dec-96	Time:	11:25
Analyzed by:	DC/HR	Date:	9-Dec-96		
Sample Matrix:	*Soil*				

Laboratory Analysis

Parameter	*Result*	*Unit of Measure*	*Detection Limit*	*Unit of Measure*
Gasoline Range Organics (C5 - C9)	597.0	mg/kg	5.0	mg/kg
Diesel Range Organics (C10 - C28)	573.1	mg/kg	5.0	mg/kg
TOTAL	1170.1	mg/kg		

Quality Assurance Report

GRO QC No.: *0480-STD*
DRO QC No.: *0512-STD*

Calibration Check

Parameter	*Method Blank*	*Unit of Measure*	*True Value*	*Analyzed Value*	*% Diff*	*Limit*
Gasoline Range (C5 - C9)	<50	ppb	1,351	1,354	0.2	15%
Diesel Range (C10 - C28)	<5.0	ppm	100	98	2.4	15%

Matrix Spike

Parameter	*1- Percent Recovered*	*2 - Percent Recovered*	*Limit*	*%RSD*	*Limit*
Gasoline Range (C5-C9)	98	94	(70-130)	3	20%
Diesel Range (C10-C28)	117	110	(70-130)	4	20%

Method - *SW-846 EPA Method 8015A mod. - Nonhalogenated Volatile Hydrocarbons by Gas Chromatography*

Approved by:
Date: 12/10/96

OFF: (505) 325-5667

ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-1556

AROMATIC VOLATILE ORGANICS

Attn:	*Bob Crabb*	Date:	17-Dec-96
Company:	*On Site Technologies, Ltd.*	*COC No.:*	*6226*
Address:	*612 E. Murray Drive*	*Sample No.*	*13129*
City, State:	*Farmington, NM 87401*	*Job No.*	*4-1318*

Project Name:	***D.J. Simmons - Simmons S-1A***				
Project Location:	***Bed Rock***				
Sampled by:	RLC	Date:	6-Dec-96	Time:	11:25
Analyzed by:	DC	Date:	12-Dec-96		
Sample Matrix:	*Soil*				

Laboratory Analysis

Component	*Result*	*Units of Measure*	*Detection Limit*	*Units of Measure*
Benzene	388.5	ug/kg	0.2	ug/kg
Toluene	13273.7	ug/kg	0.2	ug/kg
Ethylbenzene	5590.5	ug/kg	0.2	ug/kg
m,p-Xylene	42925.9	ug/kg	0.2	ug/kg
o-Xylene	3573.9	ug/kg	0.2	ug/kg
TOTAL	65752.5	ug/kg		

Method - *SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography*

Approved by:
Date: 12/17/96

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

TPH - Gasoline / Diesel Range Organics

Attn:	*Bob Crabb*	Date:	10-Dec-96
Company:	*On Site Technologies, Ltd.*	*COC No.:*	*6226*
Address:	*612 E. Murray Drive*	*Sample No.*	*13130*
City, State:	*Farmington, NM 87401*	*Job No.*	*4-1318*

Project Name:	***D.J. Simmons - Simmons S-1A***				
Project Location:	***Treated Soil; 5pt. Composite***				
Sampled by:	RLC	Date:	6-Dec-96	Time:	13:00
Analyzed by:	DC/HR	Date:	10-Dec-96		
Sample Matrix:	*Soil*				

Laboratory Analysis

Parameter	*Result*	*Unit of Measure*	*Detection Limit*	*Unit of Measure*
Gasoline Range Organics (C5 - C9)	21.4	mg/kg	5.0	mg/kg
Diesel Range Organics (C10 - C28)	266.7	mg/kg	5.0	mg/kg
TOTAL	288.1	mg/kg		

Quality Assurance Report

GRO QC No.. 0480-STD

DRO QC No.. 0512-STD

Calibration Check

Parameter	*Method Blank*	*Unit of Measure*	*True Value*	*Analyzed Value*	*% Diff*	*Limit*
Gasoline Range (C5 - C9)	<50	ppb	1,351	1,354	0.2	15%
Diesel Range (C10 - C28)	<5.0	ppm	100	109	9.5	15%

Matrix Spike

Parameter	*1- Percent Recovered*	*2 - Percent Recovered*	*Limit*	*%RSD*	*Limit*
Gasoline Range (C5-C9)	98	94	(70-130)	3	20%
Diesel Range (C10-C28)	117	110	(70-130)	4	20%

Method *- SW-846 EPA Method 8015A mod. - Nonhalogenated Volatile Hydrocarbons by Gas Chromatography*

Approved by:

Date: 12/10/96

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

AROMATIC VOLATILE ORGANICS

Attn:	*Bob Crabb*	Date:	17-Dec-96
Company:	*On Site Technologies, Ltd.*	*COC No.:*	*6226*
Address:	*612 E. Murray Drive*	*Sample No.*	*13130*
City, State:	*Farmington, NM 87401*	*Job No.*	*4-1318*

Project Name:	***D.J. Simmons - Simmons S-1A***				
Project Location:	***Treated Soil; 5pt. Composite***				
Sampled by:	RLC	Date:	6-Dec-96	Time:	13:00
Analyzed by:	DC	Date:	12-Dec-96		
Sample Matrix:	*Soil*				

Laboratory Analysis

Parameter	*Result*	*Units of Measure*	*Detection Limit*	*Units of Measure*
Benzene	11.0	ug/kg	0.2	ug/kg
Toluene	707.1	ug/kg	0.2	ug/kg
Ethylbenzene	227.8	ug/kg	0.2	ug/kg
m,p-Xylene	2353.4	ug/kg	0.2	ug/kg
o-Xylene	547.2	ug/kg	0.2	ug/kg
TOTAL	3846.6	ug/kg		

Method - *SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography*

Approved by:
Date: 12/17/96

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

QUALITY ASSURANCE REPORT

for EPA Method 8020

Date Analyzed: 12-Dec-96

Internal QC No.: 0515-QC
Surrogate QC No.: 0516-QC
Reference Standard QC No.: 0417-QC

Method Blank

Analyte	*Result*	*Units of Measure*
Average Amount of All Analytes In Blank	<0.2	ppb

Calibration Check

Analyte	*Units of Measure*	*True Value*	*Analyzed Value*	*% Diff*	*Limit*
Benzene	ppb	20.0	18.8	6	15%
Toluene	ppb	20.0	19.8	1	15%
Ethylbenzene	ppb	20.0	20.4	2	15%
m,p-Xylene	ppb	40.0	40.3	1	15%
o-Xylene	ppb	20.0	20.2	1	15%

Matrix Spike

Analyte	*1- Percent Recovered*	*2 - Percent Recovered*	*Limit*	*%RSD*	*Limit*
Benzene	93	89	(39-150)	3	20%
Toluene	98	94	(46-148)	3	20%
Ethylbenzene	100	96	(32-160)	3	20%
m,p-Xylene	97	93	(35-145)	3	20%
o-Xylene	99	96	(35-145)	3	20%

Surrogate Recoveries

Laboratory Identification	*S1 Percent Recovered*	*S2 Percent Recovered*
Limit Percent Recovery	(70-130)	
13129-6226	89	
13130-6226	94	

S1: Flourobenzene

CHAIN OF CUSTODY RECORD

6226

ON SITE TECHNOLOGIES, LTD.

657 W. Maple • P. O. Box 2606 • Farmington NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

Date: 12-6-96

Page 1 of 1

Purchase Order No.:	Job No. 4-1315		
SEND INVOICE TO: Name		REPORT RESULTS TO: Name B. B. CRABB	Title
Company D. J. SIMMONS	Dept.	Company	
Address		Mailing Address	
City, State, Zip		City, State, Zip	
		Telephone No.	Telefax No.
Sampling Location: SIMMONS 5-1A			
Sampler: RLC			

SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	PRES.	Number of Containers	8015	8020								LAB ID
BED ROCK	11-6-96	1125	Soil	✓	1	✓	✓								13179-1776
5 PT. COMP. TRIP BLK Soil	"	1300	"	✓	1	✓	✓								13180-1

ANALYSIS REQUESTED

Relinquished by: Juliet A. Crabb	Date/Time 12-6-96 / 1515	Received by:	Date/Time 12/6/96 1515
Relinquished by:	Date/Time	Received by:	Date/Time
Relinquished by:	Date/Time	Received by:	Date/Time

Method of Shipment:	Rush	24-48 Hours	10 Working Days	Special Instructions:
Authorized by: Juliet A. Crabb (Client Signature Must Accompany Request) Date 12-6-96				

Distribution: White – On Site Yellow – LAB Pink – Sampler Goldenrod – Client

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

TPH - Gasoline / Diesel Range Organics

Attn:	*Bobby Crabb*	Date:	15-Nov-96
Company:	*On Site Technologies, Ltd.*	*COC No.:*	*6185*
Address:	*612 E. Murray Drive*	*Sample No.*	*12855*
City, State:	*Farmington, NM 87401*	*Job No.*	*4-1318*

Project Name:	***D.J. Simmons - Simmons S-1A***				
Project Location:	***S-1A***				
Sampled by:	RLC	Date:	13-Nov-96	Time:	13:20
Analyzed by:	DC/HR	Date:	14-Nov-96		
Sample Matrix:	*Soil*				

Laboratory Analysis

Parameter	*Result*	*Unit of Measure*	*Detection Limit*	*Unit of Measure*
Gasoline Range Organics (C5 - C9)	2413.9	mg/kg	5.0	mg/kg
Diesel Range Organics (C10 - C28)	10936.7	mg/kg	5.0	mg/kg
TOTAL	13350.5	mg/kg		

Quality Assurance Report

GRO QC No.. 0480-STD

DRO QC No.. 0512-STD

Calibration Check

Parameter	*Method Blank*	*Unit of Measure*	*True Value*	*Analyzed Value*	*% Diff*	*Limit*
Gasoline Range (C5 - C9)	<50	ppb	1,350	1,455	7.8	15%
Diesel Range (C10 - C28)	<5.0	ppm	100	100	0.1	15%

Matrix Spike

Parameter	*1- Percent Recovered*	*2 - Percent Recovered*	*Limit*	*%RSD*	*Limit*
Gasoline Range (C5-C9)	109	109	(70-130)	0	20%
Diesel Range (C10-C28)	100	104	(70-130)	3	20%

Method *- SW-846 EPA Method 8015A mod. - Nonhalogenated Volatile Hydrocarbons by Gas Chromatography*

Approved by:

Date: 11/15/96

OFF: (505) 325-5667

ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-1556

AROMATIC VOLATILE ORGANICS

Attn:	*Bobby Crabb*	Date:	15-Nov-96
Company:	*On Site Technologies, Ltd.*	*COC No.:*	*6185*
Address:	*612 E. Murray Drive*	*Sample No*	*12855*
City, State:	*Farmington, NM 87401*	*Job No.*	*4-1318*

Project Name:	***D.J. Simmons - Simmons S-1A***				
Project Location:	***S-1A***				
Sampled by:	RLC	Date:	13-Nov-96	Time:	13:20
Analyzed by:	DC	Date:	14-Nov-96		
Sample Matrix:	*Soil*				

Laboratory Analysis

Component	*Result*	*Units of Measure*	*Detection Limit*	*Units of Measure*
Benzene	6052.7	ug/kg	0.2	ug/kg
Toluene	45659.2	ug/kg	0.2	ug/kg
Ethylbenzene	11654.7	ug/kg	0.2	ug/kg
m,p-Xylene	115285.8	ug/kg	0.2	ug/kg
o-Xylene	27888.5	ug/kg	0.2	ug/kg
TOTAL	206540.9	ug/kg		

Method - *SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography*

Approved by:
Date: 11/15/96

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

QUALITY ASSURANCE REPORT

for EPA Method 8020

Date Analyzed: 14-Nov-96

Internal QC No.: 0515-QC
Surrogate QC No.: 0516-QC
Reference Standard QC No.: 0417-QC

Method Blank

Analyte	Result	Units of Measure
Average Amount of All Analytes In Blank	<0.2	ppb

Calibration Check

Analyte	Units of Measure	True Value	Analyzed Value	% Diff	Limit
Benzene	ppb	20.0	19.8	1	15%
Toluene	ppb	20.0	19.9	1	15%
Ethylbenzene	ppb	20.0	21.3	7	15%
m,p-Xylene	ppb	40.0	41.2	3	15%
o-Xylene	ppb	20.0	21.9	9	15%

Matrix Spike

Analyte	1- Percent Recovered	2 - Percent Recovered	Limit	%RSD	Limit
Benzene	118	110	(39-150)	5	20%
Toluene	120	112	(46-148)	5	20%
Ethylbenzene	122	113	(32-160)	5	20%
m,p-Xylene	118	110	(35-145)	5	20%
o-Xylene	115	107	(35-145)	5	20%

Surrogate Recoveries

Laboratory Identification	S1 Percent Recovered	S2 Percent Recovered
Limit Percent Recovery	(70-130)	
12855-6185	86	

S1: Flourobenzene

6185

CHAIN OF CUSTODY RECORD

ON SITE TECHNOLOGIES, LTD.

657 W. Maple • P. O. Box 2606 • Farmington NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

Date: 11-13-96

Page 1 of 1

Purchase Order No.: | Job No. 41-1315

SEND INVOICE TO
Name
Company D. J. Simmons | Dept.
Address
City, State, Zip

REPORT RESULTS TO
Name Bob Crews | Title
Company
Mailing Address
City, State, Zip
Telephone No. | Telefax No.

Sampling Location: D. J. Simmons 5-1A

Sampler: RLC

SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	PRES.	Number of Containers	8020	8015	LAB ID
5-1H	11-13-96	1210	Soil	✓	1	✓		
5-1A	"	1320	"	✓	1		✓	

Relinquished by: [signature] Date/Time 11-13-96 1415
Relinquished by: Date/Time
Relinquished by: Date/Time

Received by: [signature] Date/Time 11/13/96 1415
Received by: Date/Time
Received by: Date/Time

Method of Shipment:

Authorized by: [signature] Date 11-13-96
(Client Signature Must Accompany Request)

Rush	24-48 Hours	10 Working Days	Special Instructions:

Distribution: White – On Site Yellow – LAB Pink – Sampler Goldenrod – Client