



LABORATORY REPORT

Prepared For: Geosyntec Consultants/Project Navigator - Ascon  
2100 Main Street, Suite 150  
Huntington Beach, CA 92648  
Attention: Mike Reardon

Project: Ascon - Soils  
SB0202/31

Sampled: 05/18/04  
Received: 06/04/04  
Issued: 06/09/04 08:54

NELAP #01108CA CA ELAP #1197 CSDLAC #10117

*The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain(s) of Custody, 4 pages, are included and are an integral part of this report.  
This entire report was reviewed and approved for release.*

CASE NARRATIVE

- SAMPLE RECEIPT: Samples were received intact, at 6°C, on ice and with chain of custody documentation.
- HOLDING TIMES: Holding times were met.
- PRESERVATION: Samples requiring preservation were verified prior to sample analysis.
- QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.
- COMMENTS: No significant observations were made.
- SUBCONTRACTED: Refer to the last page for specific subcontract laboratory information included in this report.

LABORATORY ID  
INF0242-01

CLIENT ID  
PNL-TP01,02,03,04,07-WASTE

MATRIX  
Soil

Reviewed By:

Del Mar Analytical, Irvine  
Amanda Cordova  
Project Manager



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STLC METALS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	STLC Limit	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: INF0242-01 (PNL-TP01,02,03,04,07-WASTE - Soil)</b>									
<b>Reporting Units: mg/l</b>									
Arsenic	6010B-STLC	4F07053	0.10	<b>0.76</b>	1	5.0	6/7/2004	6/7/2004	
Barium	6010B-STLC	4F07053	0.20	<b>14</b>	1	100	6/7/2004	6/7/2004	
Chromium	6010B-STLC	4F07053	0.10	<b>0.61</b>	1	5.0	6/7/2004	6/7/2004	
Lead	6010B-STLC	4F07053	0.10	<b>20</b>	1	5.0	6/7/2004	6/7/2004	

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**WASTE EXTRACTION TEST (STLC) - Metals/Inorganics**

Analyte	Method	Batch	Extraction Start Date	Extraction End Date	Data Qualifiers
Sample ID: INF0242-01 (PNL-TP01,02,03,04,07-WASTE - Soil) Extraction	STLC-Met	4F05037	6/5/2004	6/7/2004	

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## METHOD BLANK/QC DATA

### STLC METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
<b>Batch: 4F07053 Extracted: 06/07/04</b>										
<b>Blank Analyzed: 06/07/04 (4F07053-BLK1)</b>										
Arsenic	ND	0.10	mg/l							
Barium	ND	0.20	mg/l							
Chromium	ND	0.10	mg/l							
Lead	ND	0.10	mg/l							
<b>LCS Analyzed: 06/07/04 (4F07053-BS1)</b>										
Arsenic	20.7	0.10	mg/l	20.0		104	80-120			
Barium	19.7	0.20	mg/l	20.0		98	80-120			
Chromium	19.9	0.10	mg/l	20.0		100	80-120			
Lead	19.7	0.10	mg/l	20.0		98	80-120			
<b>Matrix Spike Analyzed: 06/07/04 (4F07053-MS1) Source: INF0242-01</b>										
Arsenic	21.9	0.10	mg/l	20.0	0.76	106	75-125			
Barium	33.3	0.20	mg/l	20.0	14	96	75-125			
Chromium	20.4	0.10	mg/l	20.0	0.61	99	75-125			
Lead	39.0	0.10	mg/l	20.0	20	95	75-125			
<b>Matrix Spike Dup Analyzed: 06/07/04 (4F07053-MSD1) Source: INF0242-01</b>										
Arsenic	22.0	0.10	mg/l	20.0	0.76	106	75-125	1	20	
Barium	33.4	0.20	mg/l	20.0	14	97	75-125	0	20	
Chromium	20.4	0.10	mg/l	20.0	0.61	99	75-125	0	20	
Lead	39.2	0.10	mg/l	20.0	20	96	75-125	1	20	

**Del Mar Analytical, Irvine**  
 Amanda Cordova  
 Project Manager



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### DATA QUALIFIERS AND DEFINITIONS

- ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.  
**RPD** Relative Percent Difference

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## Certification Summary

### Del Mar Analytical, Irvine

Method	Matrix	NELAP	CA
6010B-STLC	Soil	X	X
STLC-Met	Soil	X	X

*NV and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at [www.dmalabs.com](http://www.dmalabs.com).*

### Subcontracted Laboratories

#### Aquatic Testing Laboratories-SUB CA ELAP Cert #1775

4350 Transport Street, Unit 107 - Ventura, CA 93003

Analysis Performed: Bioassay-Haz. Waste

Samples: INF0242-01

**Del Mar Analytical, Irvine**

Amanda Cordova

Project Manager



INFO242

ADDITIONAL ANALYSIS REQUEST FORM

Today's Date: 6/4/04 Del Mar Analytical Project Manager: Amanda Cordova

Request via:  telephone  chain of custody form  fax transmission  E-mail  other

Client: Geosyntec Consultants Contact: Steve Howe (of Project Navigator)

Project: Ascon

Date Sampled: \_\_\_\_\_ Date Received: \_\_\_\_\_

Status:  in progress  completed  received today  received yesterday  on hold  other

SAMPLE NUMBER	SAMPLE DESCRIPTION	ANALYSIS REQUESTED	SPECIAL REQUIREMENTS
INE1120-01	PNL-TPO1 WASTE	Composite and run	
1148-03	5/19 12:35 02	Arsenic-STLC; Barium-STLC; Chromium-STLC; Lead-STLC; Haz Waste Bioassay	
1250-01	7/20 8:55 03		
1148-04	5/19 12:48 04		
1250-03	7/20 12:00 07		

\* New work order

TURNAROUND STATUS: \_\_\_\_\_ Same Day \_\_\_\_\_ 24hr \_\_\_\_\_ 48hr  3days  
\_\_\_\_\_ 5days \_\_\_\_\_ Standard \_\_\_\_\_ No Rush Charge





# Del Mar Analytical

## CHAIN OF CUSTODY FORM

Client Name/Address: GeoSyntec  
2100 main st #150  
Huntington Beach  
CA 92648

Project Manager/Phone Number: Mike Reardon  
(714) 969-0800

P.O. #: SB0202/31

Sampler: L Page &  
G. Yoshida

Project: ASCON LF  
Phone Number: (714) 969-0800  
Fax Number: (714) 969-0820

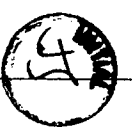
ANALYSIS REQUIRED

See Project List
CAM 17 Metals
8260
8270
418.1

TURNAROUND TIME: INE 1148

Sample Description	Sample Matrix	Container Type	# of Containers	Sampling Date/Time	Preservation	See Project List	CAM 17 Metals	8260	8270	418.1	Special Instructions
<del>PNU-TP04-Stockpile soil</del>	<del>glass</del>	<del>glass</del>	<del>2</del>	<del>5-19-04</del>	<del>None</del>	<del>X</del>					<del>1-402506/1-802</del>
<del>PNU-TP04-Stockpile soil</del>	<del>glass</del>	<del>glass</del>	<del>2</del>	<del>5-19-04</del>	<del>None</del>	<del>X</del>					<del>5 Day TAT</del>
<del>PNU-TP01-WASTE soil</del>	<del>glass</del>	<del>glass</del>	<del>2</del>	<del>5-19-04</del>	<del>None</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>		<del>5 Day TAT</del>
<del>PNU-TP04-WASTE soil</del>	<del>glass</del>	<del>glass</del>	<del>2</del>	<del>5-19-04</del>	<del>None</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>		<del>5 Day TAT</del>

Relinquished By: Karen Caballero	Date/Time: 5/19/04 3:55 PM	Received By: <i>[Signature]</i>	Date/Time: 5/19/04 3:55 PM	Turnaround Time: (check) Same Day _____ 24 Hours _____ 48 hours _____	72 Hours _____ 5 days _____ normal _____
Relinquished By: <i>[Signature]</i>	Date/Time: 5/19/04 16:20	Received By: <i>[Signature]</i>	Date/Time: 5/19/04	Sample Integrity: (Check) Intact _____ On Ice: _____	_____







Del Mar Analytical

CHAIN OF CUSTODY FORM

2852 Allon Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9689  
 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851  
 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Client Name/Address: **GeoSynTec**  
 2100 Main St, #150  
 HB, CA 92648

P.O. #: **SB0202/31**

Project: **Ascan LF**

Project Manager/Phone Number: **Mike Reardon**  
 (714) 969-0800

Phone Number: **(714) 969-0800**

Sampler: **Gary Yoshida**

Fax Number: **(714) 969-0820**

Sample Description	Sample Matrix	Container Type	# of Containers	Sampling Date/Time	Preservation	ANALYSIS REQUIRED	Special Instructions
<del>PNL-TP01 - Waste</del>	<del>soil</del>	<del>glass</del>	<del>2</del>	<del>5-18-04 07:45</del>	<del>None</del>	<del>X X X +</del>	<del>5 day TAT this sample only</del>
<del>PNL-TP05 - Stackpile soil</del>	<del>soil</del>	<del>glass</del>	<del>2</del>	<del>5-18-04 07:30</del>	<del>None</del>	<del>X</del>	
<del>PNL-TP06 - Stackpile soil</del>	<del>soil</del>	<del>glass</del>	<del>2</del>	<del>5-18-04 13:45</del>	<del>None</del>	<del>X</del>	
<i>SG</i>							
Relinquished By: _____ Date/Time: _____ Received By: <b>Garrett Jones</b> Date/Time: <b>5-19-04 9:15</b> Turnaround Time: (check) 24 Hours _____ 72 Hours _____ Same Day _____ 5 days _____ Intact <input checked="" type="checkbox"/> On Ice: <b>6°</b> Sample Integrity: (Check) normal <input checked="" type="checkbox"/> <b>35 noted above</b>							



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9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (619) 505-8596 FAX (619) 505-9699  
9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851  
2520 E. Sunset Rd., Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Client Name/Address: GeoSyntec 2100 Main St. #150 HB, CA 92648		P.O. #: SB0202/31		Project: Ascan		ANALYSIS REQUIRED see project list CAM17 metals 8260 8270 418.1		INE1250	
Project Manager/Phone Number: Mike Rendar (714) 969-0800 Sampler: Garry Yoshinori Garry Yoshinori		Phone Number: (714) 969-0800		Fax Number: (714) 969-0820		Special Instructions 5 day TAT 5 day TAT 18oz jar & 14oz jar			
Sample Description	Sample Matrix	Container Type	# of Containers	Sampling Date/Time	Preservation				
PNI-TPO3 Waste Soil		glass	2	5-20-04 09:55	None	X	X	X	
PNI-TPO3 stockpile				5-20-04 09:00		X	X	X	
PNI-TPO3-WASTE				5-20-04 12:00		X	X	X	
PNI-TPO3-Stockpile				5-20-04 12:00		X	X	X	
(Circular stamp: N/A)									
Relinquished By: Tamm Aaga		Date/Time: 5:20:04 16:15		Received By: Garry Yoshinori		Date/Time: 5-20-04 16:50		Turnaround Time: (check) Same Day <input type="checkbox"/> 72 Hours <input type="checkbox"/>	
Relinquished By: Garry Yoshinori		Date/Time: 5:20:04 16:50		Received By: Garry Yoshinori		Date/Time: 5-20-04 16:50		48 hours Sample Integrity: (Check) normal <input checked="" type="checkbox"/> X	
Relinquished By:		Date/Time:		Received By:		Date/Time:		Intact <input checked="" type="checkbox"/> On Ice: <input checked="" type="checkbox"/> 32	

June 10, 2004

Geosyntec Consultants  
2100 Main Street, Suite 150  
Huntington Beach, CA 92648

Attention: Mike Reardon

Subject: Ascon-Soils  
Sampled: 05/18/04  
Del Mar Analytical Report Number: INF0242

Dear Mr. Reardon:

Aquatic Testing Laboratories performed the CCR Title 22 Fathead Minnow Hazardous Waste Screen Bioassay for the project referenced above. Please use the following cross-reference table when reviewing your results.

Geosyntec ID	Del Mar -- Irvine ID	ATL ID
PNL-TP01-WASTE	INF0242-01	A-04060501-001

The final report from the subcontract laboratory is attached. Should you have any questions or comments please contact me at (949) 261-1022, extension 229.

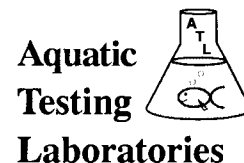
Sincerely,  
DEL MAR ANALYTICAL



Amanda Cordova  
Project Manager

Enclosure

# LABORATORY REPORT



**Date:** June 10, 2004

*"dedicated to providing quality aquatic toxicity testing"*

**Client:** Del Mar Analytical  
2852 Alton Ave.  
Irvine, CA 92606  
Attn: Amanda Cordova

4350 Transport Street, Unit 107  
Ventura, CA 93003  
(805) 650-0546 FAX (805) 650-0756

CA DOHS ELAP Cert. No.: 1775

**Laboratory No.:** A-04060501-001  
**Sample I.D.:** INF0242-01

**Sample Control:** The sample was received by ATL with the chain of custody record attached.

Date Sampled: 05/18/04  
Date Received: 06/05/04  
Date Tested: 06/05/04 to 06/10/04

**Sample Analysis:** The following analyses were performed on your sample:  
  
CCR Title 22 Fathead Minnow Hazardous Waste Screen Bioassay (Polisini & Miller 1988).  
  
Attached are the test data generated from the analysis of your sample.

## Result Summary:

<u>Sample ID.</u>	<u>Results</u>
INF0242-01	PASSED (LC50 > 750 mg/l)

**Quality Control:** Reviewed and approved by:

Joseph A. LeMay  
Laboratory Director



## FATHEAD MINNOW HAZARDOUS WASTE SCREEN BIOASSAY

Lab No.: A-04060501-001

Client/ID: ORMC CNF 0242 01

### TEST SUMMARY

Species: *Pimephales promelas*.  
 Fish length (mm): av: 24.7; min: 24; max: 26.  
 Fish weight (gm): av: 0.23; min: 0.20; max: 0.27.  
 Test chamber volume: 10 liters.  
 Temperature: 20 +/- 2°C.  
 Aeration: Single bubble through narrow bore tube.  
 Number of replicates: 2.  
 Dilution water: Soft reconstituted water (40 - 48 mg/l CaCO<sub>3</sub>).  
 QA/QC Batch No.: RT-040514.

Source: In-lab culture.  
 Regulations: CCR Title 22.  
 Test Protocol: California F&G/DHS 1988.  
 Endpoints: Survival at 96 hrs.  
 Test type: Static.  
 Feeding: None.  
 Number of fish per chamber: 10.  
 Photoperiod: 16/8 hrs light/dark.  
 Extraction method: Mechanical shaking.

### TEST DATA

	INITIAL			24 Hr				48 Hr				72 Hr				96 Hr			
	°C	DO	pH	°C	DO	pH	# D	°C	DO	pH	# D	°C	DO	pH	# D	°C	DO	pH	# D
Date/Time:	6-6-04 0930			6-7-04 0930				6-8-04 1000				6-9-04 1200				6-10-04 1030			
Analyst:	JK			JK				LM				LM				LM			
Control A	20.5	8.2	7.9	20.7	7.4	7.8	0	20.5	8.3	7.8	0	20.5	8.3	8.0	0	20.4	8.4	8.0	0
Control B	20.5	8.4	7.9	20.8	7.7	7.8	0	20.4	8.0	7.8	0	20.5	8.2	8.0	0	20.3	8.1	8.0	0
400 mg/l A	20.5	8.6	8.0	20.7	8.0	7.9	0	20.5	7.7	7.9	0	20.5	7.9	8.0	0	20.4	8.1	8.0	0
400 mg/l B	20.5	8.2	8.0	20.7	8.1	7.9	0	20.5	7.9	7.9	0	20.5	7.9	8.0	0	20.3	8.0	8.0	0
750 mg/l A	20.4	8.6	8.0	20.7	8.0	8.0	0	20.4	7.8	7.9	0	20.5	7.8	7.9	0	20.3	7.9	7.9	0
750 mg/l B	20.4	8.7	8.0	20.6	8.2	8.0	0	20.4	7.7	8.0	0	20.4	7.4	7.9	0	20.3	7.6	7.9	0
Comments:																			

	CONTROL		HIGH CONCENTRATION	
	Alkalinity	Hardness	Alkalinity	Hardness
Initial	30 mg/l CaCO <sub>3</sub>	44 mg/l CaCO <sub>3</sub>	30 mg/l CaCO <sub>3</sub>	47 mg/l CaCO <sub>3</sub>
Final	32 mg/l CaCO <sub>3</sub>	44 mg/l CaCO <sub>3</sub>	50 mg/l CaCO <sub>3</sub>	66 mg/l CaCO <sub>3</sub>

### RESULTS

Total Number Dead	
Control	0 / 20
400 mg/l	0 / 20
750 mg/l	0 / 20

✓ (one)	Result	Description
X	PASSED	LC50 > 750 mg/l (<40% dead in 750 mg/l conc.)
—	FAILED	≥40% dead in 750 mg/l (definitive test recommended)
—	FAILED	LC50 < 400 mg/l (>60% dead in 400 mg/l conc.)



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 2520 E. Sunset Rd., Suite #3, Las Vegas, NV 89120 Ph (702) 798-3620 Fax (702) 798-3621

## SUBCONTRACT ORDER - PROJECT # INF0242

**SENDING LABORATORY:**

Del Mar Analytical, Irvine  
 2852 Alton Parkway  
 Irvine, CA 92606  
 Phone: (949) 261-1022  
 Fax: (949) 261-1228  
 Project Manager: Amanda Cordova

**RECEIVING LABORATORY:**

Aquatic Testing Laboratories-SUB  
 4350 Transport Street, Unit 107  
 Ventura, CA 93003  
 Phone : (805) 650-0546  
 Fax: (805) 650-0756

**Work Order Comments:** Have high hydrocarbons. Please charge \$80 for 8081-Pesticides. Prices include cleanup fees.

Standard TAT is requested unless specific due date is requested => **Due Date:** 6-9-04 **Initials:** VB

Analysis	Expiration	Comments
Sample ID: INF0242-01 Soil Bioassay-Haz. Waste	Sampled: 05/18/04 07:45 05/25/04 07:45	Add-on, INE1120-01, INE1148-03&-04, INE1250-01&-03 composite of 5

- Containers Supplied:**
- 4 oz Jar (INF0242-01F)
  - 4 oz Jar (INF0242-01G)
  - 4 oz Jar (INF0242-01H)
  - 4 oz Jar (INF0242-01I)
  - 4 oz Jar (INF0242-01J)

**SAMPLE INTEGRITY:**

All containers intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Sample labels/COC agree: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Samples Received On Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Custody Seals Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Samples Preserved Properly: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Samples Received at (temp): <u>0</u>

Released By: Van Bank Date: 6-4-04 Time: 17:00 Received By: Fed Ex Date: \_\_\_\_\_ Time: \_\_\_\_\_

Released By: Fed Ex Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received By: Lou Montoya Date: 6-5-04 Time: 1100