

SITE HEALTH AND SAFETY PLAN

A. General Information

Site Name APAC Castle Hayne ID # NONCD 000 2779

Location 4901 N College Road, Castle Hayne, New Hanover County, NC

Proposed Date of Investigation 6/25/08 to 7/25/08

Date of Briefing 6/18/08

Date of Debriefing 7/28/08

Nature of Visit (check one): On-Site Reconnaissance
Off-Site Reconnaissance
Sampling X
Sampling Overview
Remediation Overview

Health Department Official Contacted Dianne Harvell

Date of Contact 6/18/08

Site Investigation Team: All site personnel have read the Site Health and Safety Plan and are familiar with its provisions.

<u>Personnel</u>	<u>Responsibilities</u>	<u>Signature</u>
Team 1 <u>Ginny Henderson</u>	<u>team leader, sampling</u>	
Team 1 <u>Sue Robbins</u>	<u>sampling</u>	

Plan Preparation:

Prepared By: David Lilley, Industrial Hygiene Consultant

Reviewed By: Jack Butler, Superfund Section Chief 

B. SITE/WASTE CHARACTERISTICS

Waste Type(s) X Liquid Solid Sludge Gas X Vapor
Characteristics Corrosive X Ignitable Radioactive
 X Volatile X Toxic Reactive Other

List Known or Suspected Hazards (physical, chemical biological or radioactive) on Site and their toxicological effects. Also, if known, list chemical amounts

HAZARD	WARNING PROPERTIES	EXPOSURE LIMIT
<u>1,1-dichloroethylene</u>	<u>Odor Threshold (OT) = 190 ppm</u>	<u>1 ppm</u>
<u>1,1-dichloroethane</u>	<u>OT = 120 ppm</u>	<u>100 ppm</u>
<u>1,2-dichloroethene</u>	<u>OT = 0.26 ppm</u>	<u>200 ppm</u>
<u>Acetone</u>	<u>OT = 20 ppm</u>	<u>500 ppm</u>
<u>Methyl Ethyl Ketone</u>	<u>OT = 5.4 ppm</u>	<u>200 ppm</u>

UNDERGROUND UTILITIES CHECKLIST

<u>Utility</u>	<u>Locator/Contact Person</u>	<u>Phone #</u>	<u>Date of Location</u>
Power			
Telephone			
Gas			
Water			
Sewer			

Call made by:

Facility Description: Size unknown Buildings yes
 Disposal Methods Being Investigated unknown

Unusual Features on Site (dike integrity, power lines, terrain, etc.):
None known

History of the Site: The site is a groundwater plume.

C. HAZARD EVALUATION

The site can be toured and sampled in level D protection. PVC gloves will be worn while collecting water samples.

D. WORK PLAN INSTRUCTION

Map or Sketch Attached? yes

Perimeter Identified? no

Command Post Identified? no

Zones of Contamination Identified? no

Personal Protective Equipment/Level of Protection: C X D

Modifications Wear goggles, face shield, and PVC gloves while preparing acid preserved samples, goggles and PVC gloves while collecting acid preserved samples. Avoid breathing acid vapors.

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ID # NONCD 000 2779

Surveillance Equipment:

 HNU

 OVA

 Explosimeter

 Detector Tubes and Pumps

 O2 Meter

 Radiation Monitor

Decontamination Procedures

 Level C Respirator wash, respirator removal, suit wash (if needed), suit removal, boot wash, boot removal and glove removal.

 X Level D Boot wash and rinse and boot removal, suit removal, glove and goggle removal.

Modifications Dispose of trash properly, on-site if possible.

Work Schedule/Visit Objectives The purpose of this visit is to determine

if the site poses a threat to the public health or environment because of releases of contaminants to soil, surface water, groundwater, or air. Sampling may consist of groundwater sampling.

EMERGENCY PRECAUTIONS

<u>Route of Exposure</u>	<u>First Aid</u>
<u>Eyes</u>	<u>irrigate immediately</u>
<u>Skin</u>	<u>soap and water wash</u>
<u>Inhalation</u>	<u>fresh air and artificial respiration</u>
<u>Ingestion</u>	<u>get medical attention immediately</u>

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ID # NONCD 000 2779

Location of Nearest Phone: nearby residences

Hospital (Address and Phone Number)

New Hanover Memorial Hospital, 2131 S. 17th Street, Wilmington, NC

(910) 343-7000

Emergency Transportation Systems (Phone Numbers)

Fire 911

Ambulance 911

Rescue Squad 911

Emergency Route to Hospital see next page

PREVAILING WEATHER CONDITIONS AND FORECAST

EQUIPMENT CHECKLIST

<u> </u> Air purifying respirator	<u> X </u> First Aid Kit
<u> </u> Cartridges for respirator	<u> X </u> 3 gal. Deionized H2O
<u> X </u> Eye Wash Unit	<u> X </u> Rain suit
<u> </u> HNU	<u> X </u> Gloves (PE/PVC/nitrile/cloth)
<u> </u> OVA	<u> X </u> Boots/Boot Covers
<u> </u> Explosimeter	<u> X </u> Coveralls (tyvek/saranex)
<u> </u> Radiation Monitor	<u> X </u> Eye Protection (goggles/shield)
<u> X </u> Decontamination Materials	<u> X </u> Hard Hat

STATE POISON CONTROL CENTER

1-800-848-6946

North Carolina OSHA
1-800-LABOR-NC

safeform.doc

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TO BE COMPLETED BY PROJECT MANAGER

PROJECT MANAGER: Ginny Henderson PROJECT: APAC Castle Hayne
INVESTIGATION DATE: 6/25/08 to 7/25/08

RECONNAISSANCE _____ SAMPLING VISIT X REMEDIATION/SAMPLING OVERVIEW

Respirator Worn By _____ Approximate Time in Respirator _____

Air Monitoring Data

PID: (circle one) Mini Rae, HNU
Serial Number _____
Calibration Reading _____
Notes _____

OVA
Serial Number _____
Notes _____

CGI/Oxygen Meter
Serial Number _____
Calibration Reading _____
Notes _____

Radiation Meter
Serial Number _____
Notes _____

Were there any injuries? NO If yes, explain:

Signature





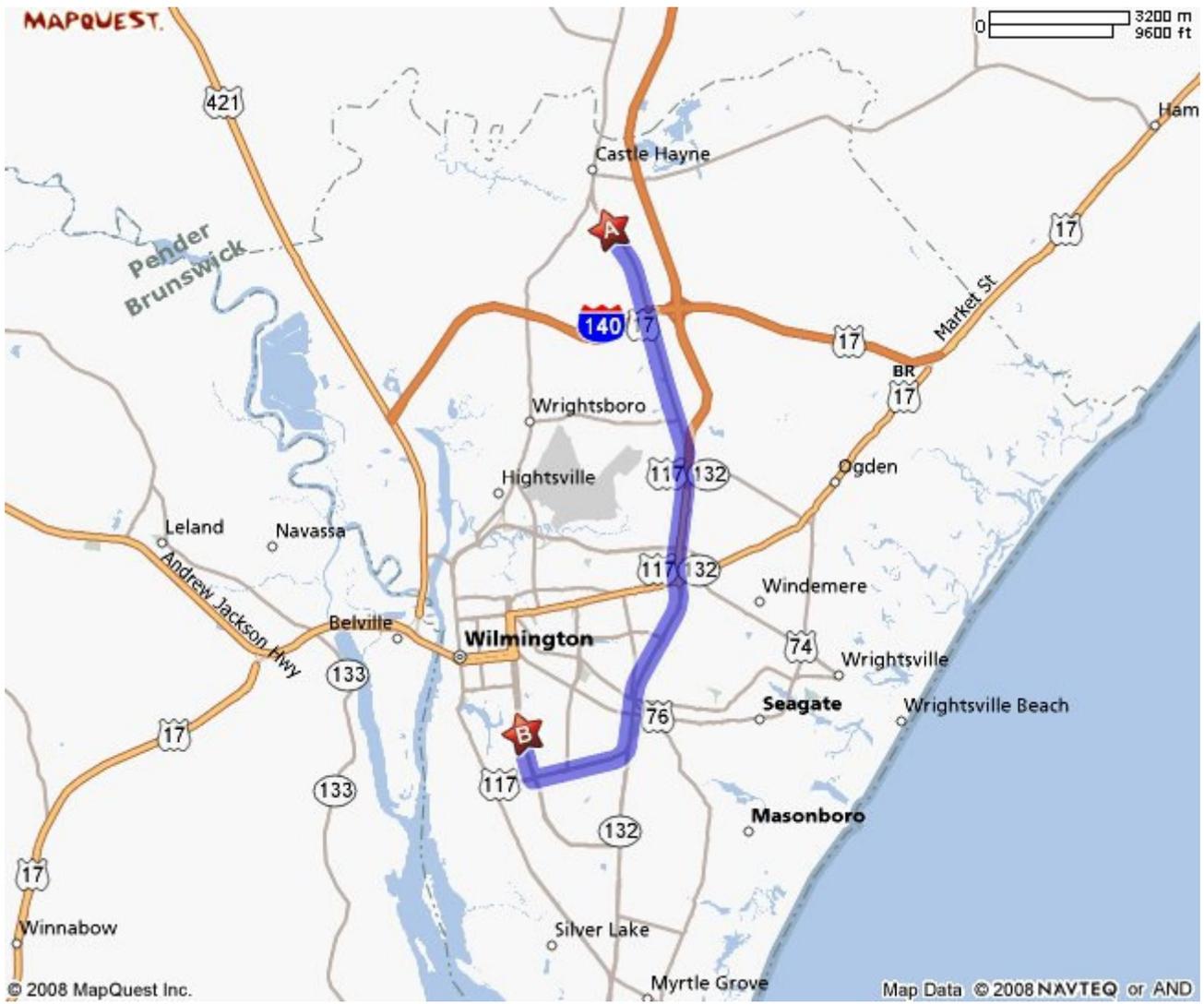
A: 4901 N College Rd, Castle Hayne, NC 28429-6008

- START
1: Start out going SOUTH on N COLLEGE RD/US-117 S/NC-132 S toward OLD OAKLAND DR.
4.6 mi
- RAMP
2: Take the I-40 E ramp.
0.4 mi
- 3: Merge onto N COLLEGE RD/US-117 S/NC-132 S.
5.2 mi
- 4: Turn SLIGHT RIGHT onto US-117 S/SHIPYARD BLVD.
1.9 mi
- 5: Turn RIGHT onto S 17TH ST.
0.9 mi
- END
6: End at 2131 S 17th St Wilmington, NC 28401-7407

Estimated Time: 19 minutes Estimated Distance: 13.06 miles

B: 2131 S 17th St, Wilmington, NC 28401-7407

Total Time: 19 minutes Total Distance: 13.06 miles



Directions and maps are informational only. We make no warranties on the accuracy of their content, road conditions or route usability or expeditiousness. You assume all risk of use. MapQuest and its suppliers shall not be liable to you for any loss or delay resulting from your use of MapQuest. Your use of MapQuest means you agree to our [Terms of Use](#)

EXHIBIT 8

Section No. 4.0
Revision No. 12
Date: 8-25-05
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KEY RISK MANAGEMENT SERVICES, INC.
ATTN: STATE UNIT
P.O. BOX 49129
GREENSBORO, NC 27419



WORKERS' COMPENSATION MEDICAL AUTHORIZATION

Name of Employee/Patient: Last		First	
Date of Injury:	Social Security Number: - -		
Name of Employer/Company:		STATE OF NORTH CAROLINA	
Employer Authorization:		Doctor To Be Seen:	

Employer: Complete this form, and give it to the injured employee before a doctor is seen.

Employee: Show this form to the doctor.

Physician: When a referral is necessary - use CompCare Physicians and call 1-800-366-1511, to let the state agency claims representative know that the patient is being referred.

SEND BILL DIRECTLY TO KEY RISK MANAGEMENT SERVICES, INC.

HAZARDOUS SUBSTANCE INFORMATION FORM

Chemical Name: 1,1 - dichloroethane

I. PHYSICAL/CHEMICAL PROPERTIES

	Reference
Chemical Formula <u>C₂H₄Cl₂</u>	<u>1</u>
Natural Physical State at 25°C <u>liquid</u>	<u>1</u>
Vapor Pressure _____ mm Hg at 20°C	_____
Melting Point <u>-98</u> °F/°C Boiling Point <u>57.3</u> °F/°C	<u>1</u>
Flash Point (open or closed cup) <u>57</u> °C/°F	<u>2</u>
Solubility - H ₂ O <u>in about 200 parts water</u>	<u>1</u>
Other <u>miscible with alcohol</u>	<u>1</u>

Physical Features: (odor, color, etc.) oily liquid, odor and taste as of chloroform (1) OVA Relative Response = 80%

II. TOXICOLOGICAL DATA

Standards: 100 ppm (3) TLV 100 ppm (4) PEL 4,000 ppm IDLH 2

Routes of Exposure: Inhalation, Eye Contact, Skin Contact, Ingestion

Acute/Chronic Symptoms: Salivation, sneezing, coughing, dizziness, nausea, vomiting, eye irritation, skin irritation, circulatory failure (2).

First Aid: Inhalation: artificial respiration; Ingestion: get medical attention immediately; Eye contact: irrigate immediately; Skin contact: soap and water wash immediately

Chemical Name: 1,1 - dichloroethane

III. HAZARDOUS CHARACTERISTICS		Reference
A. Combustibility	Yes <u>X</u> No _____	<u>2</u>
Toxic by-products	<u>emits highly toxic fumes</u> <u>including phosgene</u>	<u>2</u>
B. Flammability	LEL <u>5.6%</u> UEL <u>11.4%</u>	<u>2</u>
C. Reactivity Hazard	_____	_____
D. Corrosivity Hazard	yes/no pH: _____	_____
Neutralizing agent:	_____	_____
E. Radioactive Hazard	Exposure Rate	
Background	yes/no _____	_____
Alpha particles	yes/no _____	_____
Beta particles	yes/no _____	_____
Gamma radiation	yes/no _____	_____

IV. REFERENCES

- (1) The Merck Index, 11th Edition, 1989.
- (2) Chemical Hazard Response Information System, US
Department of Transportation, 1987.
- (3) Threshold Limit Values and Biological Exposure
Indices, ACGIH, 2007
- (4) 29 CFR 1910.1000.

HAZARDOUS SUBSTANCE INFORMATION FORM

Chemical Name: 1,1-dichloroethylene

I. PHYSICAL/CHEMICAL PROPERTIES

	Reference
Chemical Formula <u>C₂H₂Cl₂</u>	<u>1</u>
Natural Physical State at 25°C <u>liquid</u>	<u>1</u>
Vapor Pressure _____ mm Hg at 20°C	_____
Melting Point <u>-122.5</u> °F/°C Boiling Point <u>31.7</u> °F/°C	<u>1</u>
Flash Point (open or closed cup) <u>-15</u> °C/°F	<u>1</u>
Solubility - H ₂ O <u>practically insoluble</u>	<u>1</u>
Other <u>soluble in organic solvents</u>	<u>1</u>
Physical Features: (odor, color, etc.) <u>mild, sweet odor resembling that of chloroform. (1)</u>	

II. TOXICOLOGICAL DATA

Standards: 5 ppm (2) TLV 1 ppm (3) PEL no data IDLH

Routes of Exposure: Inhalation, Ingestion, Skin and/or eye contact

Acute/Chronic Symptoms: Irritant to skin, mucous membranes, narcotic in high concentrations, has caused liver, kidney injury in experimental animals (1)

First Aid: Inhalation: artificial respiration; Ingestion: get medical attention immediately; Eye contact: irrigate immediately; Skin contact: soap and water wash immediately

HAZARDOUS SUBSTANCE INFORMATION FORM

Chemical Name: 1,2-Dichloroethylene

I. PHYSICAL/CHEMICAL PROPERTIES

	Reference
Chemical Formula <u>C₂H₂Cl₂</u>	<u>1</u>
Natural Physical State at 25°C <u>liquid</u>	<u>2</u>
Vapor Pressure <u>180-265</u> mm Hg at 20°C	<u>3</u>
Melting Point <u>-56 to -115</u> /°C Boiling Point <u>113 to 140</u> °F/°C	<u>3</u>
Flash Point (open or closed cup) <u>36 - 39</u> °C/°F	<u>3</u>
Solubility - H ₂ O <u>0.35 to 0.63%</u>	<u>3</u>
Other <u>alcohol, ether, most organic solvents</u>	<u>2</u>

Physical Features: (odor, color, etc.) Colorless liquid with an ether-like slightly acrid odor, like chloroform (3) IP = 9.65 eV
OVA Relative Response = 50%

II. TOXICOLOGICAL DATA

Standards: 200 ppm (4) TLV 200 ppm (5) PEL 4,000ppm (3) IDLH

Routes of Exposure: Ingestion, Inhalation, Eye and/or skin contact

Acute/Chronic Symptoms: Irritation of the eyes and respiratory system, central nervous system depression (3)

First Aid: Inhalation: artificial respiration; Ingestion: get medical attention immediately; Eye contact: irrigate immediately; Skin contact: soap and water wash immediately.

Chemical Name: 1,2-Dichloroethylene

III. HAZARDOUS CHARACTERISTICS

Reference

A. Combustibility	Yes <u>X</u> No <u> </u>	<u>6</u>
Toxic by-products	<u>phosgene and</u> <u>HCl formation</u>	<u>6</u>
B. Flammability	LEL <u>9.7%</u> UEL <u>12.8%</u>	<u>6</u>
C. Reactivity Hazard	<u>Not reactive with common materials</u>	<u>6</u>
D. Corrosivity Hazard	yes/no pH: <u> </u>	<u> </u>

Neutralizing agent:

E. Radioactive Hazard		Exposure Rate	
Background	yes/no	<u> </u>	<u> </u>
Alpha particles	yes/no	<u> </u>	<u> </u>
Beta particles	yes/no	<u> </u>	<u> </u>
Gamma radiation	yes/no	<u> </u>	<u> </u>

IV. REFERENCES

1. The Condensed Chemical Dictionary, Sax, 11th Edition, 1987.
2. The Merck Index, 11th Edition, Sax, 1989.
3. Pocket Guide to Chemical Hazards, NIOSH, 1990.
4. Threshold Limit Values and Biological Exposure Indices for 2007 ACGIH.
5. 29 CFR 1910.1000.
6. Chemical Hazard Response Information System, US Department of Transportation, 1987.

HAZARDOUS SUBSTANCE INFORMATION FORM

Chemical Name: Acetone

I. PHYSICAL/CHEMICAL PROPERTIES

Reference

Chemical Formula	<u>CH₃COCH₃</u>	<u>1,2</u>
Natural Physical State at 25°C	<u>liquid</u>	<u>1,2</u>
Vapor Pressure	<u>180</u> mm Hg at 20°C	<u>2</u>
Melting Point	<u>-140°F/°C</u> Boiling Point <u>133°F/°C</u>	<u>2</u>
Flash Point (open or closed cup)	<u>0 °C/°F</u>	<u>2</u>
Solubility - H ₂ O	<u>miscible</u>	<u>2</u>
	Other	

Physical Features: (odor, color, etc.) colorless liquid with a fragrant, mint-like odor. IP=9.69 eV (2) HNU Relative Response = 6.3 with the 10.2 eV probe. OVA Relative Response = 60%.

II. TOXICOLOGICAL DATA

Standards: 500 ppm (3) TLV 750 ppm (4) PEL
20,000 ppm (2) IDLH

Routes of Exposure: Inhalation, contact with skin will cause dryness.

Acute/Chronic Symptoms: Irritation of eyes, nose and throat. Headaches, dizziness, and dermatitis. (2)

First Aid: Inhalation: artificial respiration; Ingestion: get medical attention immediately; Eye contact: irrigate immediately; Skin contact: soap and water wash immediately.

Chemical Name: Acetone

III. HAZARDOUS CHARACTERISTICS Reference

A. Combustibility Yes X No 2
Toxic by-products

B. Flammability LEL 2.5% UEL 13% 2

C. Reactivity Hazard oxidizing material and acids

D. Corrosivity Hazard yes/no pH:

Neutralizing agent:

E. Radioactive Hazard Exposure Rate

Background yes/no

Alpha particles yes/no

Beta particles yes/no

Gamma radiation yes/no

IV. REFERENCES

1. Chemical Safety Data Guide, BNA - 1985.

2. Pocket Guide to Chemical Hazards, NIOSH - 1990.

3. Threshold Limit Values and Biological Exposure
Indices for 2007

4. 29 CFR 1910..

HAZARDOUS SUBSTANCE INFORMATION FORM

Chemical Name: Methyl Ethyl Ketone (2 Butanone)

I. PHYSICAL/CHEMICAL PROPERTIES

Reference

Chemical Formula	<u>C4 H8 O</u>	<u>1,2,3</u>
Natural Physical State at 25°C	<u>liquid</u>	<u>1,2,3</u>
Vapor Pressure	<u>70.6</u> mm Hg at 20°C	<u>2,3</u>
Melting Point	<u>-123 °F/°C</u> Boiling Point <u>175 °F/°C</u>	<u>2</u>
Flash Point (open or closed cup)	<u>35 °C/°F</u>	<u>1,2</u>
Solubility - H ₂ O	<u>27%</u>	<u>1,3</u>
	Other <u>common organic solvents</u>	<u>2</u>

Physical Features: (odor, color, etc.) clear, colorless liquid with acetone-like odor, odor detection 10 ppm IP - 9.48 eV Hnu sensitivity with 10.2 eV probe = 5.7

II. TOXICOLOGICAL DATA

Standards: 200 ppm (4) TLV 200 ppm (5) PEL 3000 ppm (3) IDLH

Routes of Exposure: Inhalation, Ingestion, Skin Contact, Eye Contact

Acute/Chronic Symptoms: irritation of eyes and nose, headache, dizziness, vomiting (3).

First Aid: Inhalation: artificial respiration; Ingestion: get medical attention immediately; Eye contact: irrigate immediately; Skin contact: soap and water wash immediately.

Chemical Name: Methyl Ethyl Ketone

III. HAZARDOUS CHARACTERISTICS	Reference
A. Combustibility Yes <u>x</u> No _____ Toxic by-products _____	<u>2</u>
B. Flammability LEL <u>12%</u> UEL <u>20%</u>	<u>2</u>
C. Reactivity Hazard <u>very strong oxidizers</u>	<u>3</u>
D. Corrosivity Hazard <u>yes/no</u> pH: _____	
Neutralizing agent:	
E. Radioactive Hazard	Exposure Rate
Background <u>yes/no</u>	
Alpha particles <u>yes/no</u>	
Beta particles <u>yes/no</u>	
Gamma radiation <u>yes/no</u>	

IV. REFERENCES

- (1) The Merck Index, 11th Edition, 1989.
- (2) Documentation of the TLV's, 1980.
- (3) NIOSH Pocket Guide to Chemical Hazards, 1990.
- (4) Threshold Limit Values and Biological Exposure Indices for 2007 ACGIH
- (5) 29 CFR 1910.1000