Tetra Tech EM Inc.

HEALTH AND SAFETY PLAN

Site Name: Delatte Metals, Inc.	**Site Contact:** Althea Foster	**Phone:** (504) 370-4770
Location: 19113 Weinberger Road, Ponchatoula, Louisiana	**EPA Contact:** Stephen Tzhone	**Phone:** (214) 665-8409
EPA I.D. No. LAD052510344	**Prepared By:** Pamela Phillips	**Date:** 11/10/98
Project No. G00DA002501	**Date of Proposed Activities:** 11/30-12/18/98	

Objectives:

Conduct sampling as part of a Superfund remedial investigation/feasibility study (RI/FS). Field personnel will collect (1) soil and ground water samples with a track-mounted Geoprobe™ and with a drill rig, and (2) surface water and sediment samples and biota samples.

Site Type: *Check as many as applicable.*

[ ] Active	[ ] Landfill	[ ] Unknown
[XX] Inactive	[XX] Uncontrolled	[ ] Gasoline service station
[ ] Secure	[XX] Industrial	[ ] Other *(specify)* _____
[XX] Unsecure	[ ] Recovery	
[ ] Enclosed space	[ ] Well Field	

97452

001501

Site Description and History:

Delatte Metals, Inc. (DM) is located in Ponchatoula, Louisiana. The facility occupies about 17.6 acres situated near Selsers Creek in southern Tangipahoa Parish in southern Louisiana. From 197(until 1993, the facility recycled and smelted lead-acid batteries. The site is currently used as a transfer station for used lead batteries; recycling and recovery activities are no longer conducted at th facility.

Site operations generated several waste streams containing heavy metals and acids; the waste streams were stored in a concrete settling basin, an earthen impoundment and several piles on the facility. An acid tank farm, tote bags of baghouse dust, and drums containing metal-contaminated waste are also on site. In 1987, DM closed the earthen impoundment after excavating waste and backfilling with clean soil. A groundwater investigation was conducted in 1987 by IT Corporation (IT) on behalf of DM in response to a compliance order from the Louisiana Department Of Environmental Quality (LDEQ). In 1990, LDEQ Ground Water Protection Division (GWPD) ordered DM to develop and submit a Ground Water Protection Plan to correct heavy metal contamination and pH measurements below 2.0. A ground water remediation plan was approved by LDEQ in May 1993, but it was never implemented by DM. On September 25, 1995, the GWPD referred the site to the LDEQ Inactive and Abandoned Sites Division and EPA CERCLA section due to repeated RCRA violations and a lack of response from DM. EPA completed a site inspection in March, 1997, and found metals contamination to be widespread on site and in perimeter drainage pathways.

Waste Management Practices:
Battery sawing operations produced waste streams of lead-contaminated casing material and sawdust. Lead-contaminated wastes were stored long term in uncovered piles exposed to the elements. Storm water runoff carried contamination from the piles to surface water drainage pathways. Acidic lead-bearing sludge was stored in an earthen impoundment and a concrete basin. Secondary lead smelting operations produced waste streams of baghouse dust (K069 listed waste) and slag. Extensive surficial soil contamination was measured and is visible. According to data from the site investigation in 1995, lead levels in soil and waste range up to 500,000 parts per million (ppm) at the site in waste; 300,000 ppm in soil; and 70,000 ppm in sediment. Lead levels up to 0.4 ppm were found in groundwater, as were pH values below 1.0. Other heavy metal contamination probably exists at the site, but levels are expected to be much lower than those for lead. The site has not been secured, and substantial amounts of contaminated waste are accessible to the public. The site is currently under consideration for inclusion on the National Priorities List (NPL).

Waste Types: [XX] Liquid [XX] Solid [XX] Sludge [ ] Gas [ ] Unknown [ ] Other

Waste Characteristics:

- [XX] Corrosive
- [XX] Toxic
- [ ] Inert
- [ ] Ignitable
- [ ] Flammable
- [XX] Volatile
- [ ] Reactive
- [ ] Radioactive
- [ ] Unknown
- [ ] Other

Hazards of Concern:

- [ ] Heat stress
- [XX] Cold stress
- [ ] Explosive/flammable
- [ ] Oxygen deficient
- [ ] Radiological
- [ ] Underground storage tanks
- [XX] Surface tanks
- [XX] Buried utilities
- [XX] Overhead utilities
- [XX] Biological (including hantavirus from the deer mouse)
- [XX] Noise
- [XX] Inorganic chemicals
- [XX] Organic chemicals
- [XX] Heavy equipment
- [XX] Other *(specify)* Trip/Fall .

Fire or Explosion Potential: [ ] High [ ] Medium [X] Low [ ] Unknown

Chemical Products Tetra Tech EM Inc. Will Use or Store On Site (Attach a Material Safety Data Sheet [MSDS] for each item)

[XX] Alconox (Liqui-Nox)

[XX] Nitric acid

[ ] Sulfuric acid

[ ] Sodium hydroxide

[XX] Other *(specify)* Sodium hypochlorite solution

[ ] Other *(specify)* _____

[ ] Other *(specify)* _____

[ ] Other *(specify)* _____

[ ] Other *(specify)* _____

[ ] Other *(specify)* _____

001503

Chemicals Present at Site	Highest Observed Concentration (specify units and media)	PEL/TLV specify ppm or mg/m³	IDLH specify ppm or mg/m³	Symptoms and Effects of Acute Exposure	Photo-ionization Potential (eV)
Lead Inorganic dusts (as lead)	500,000 ppm waste	0.05 mg/m³	100 mg/m³ (as Pb)	Lassitude; insomnia; pallor, eye grounds; anorexia, weight loss, malnutrition; constipation, abdominal pain, colic; hypotension; anemia; gingival lead line; trembling, paralyzed wrist, ankles; encephalopathy; kidney disease; irritated eyes; hypotension	NE
Sulfuric acid	pH<1 groundwater	1 mg/m³	15 mg/m³	Eye, skin, nose, throat irritation; pulmonary edema, bronchitis; emphysema; conjunctivitis; stomatitis; dental erosions; tracheobronchitis; skin, eye burns; dermatitis	NE

A = Air
CA= Cancer
CARC = Carcinogenic
ppm = Parts per million
GI = Gastrointestinal
eV = Electron volts
GW = Groundwater
IDLH = Immediately dangerous to life or health
mg = Milligram
NA = Not available
NE = None established
PEL = Permissible exposure limit
m^3 = Cubic meter
S = Soil
SW = Surface Water
TLV = Threshold limit value
kg = Kilogram
U = Unknown
μg = Microgram

HEALTH AND SAFETY PLAN

Field Activities Covered Under This Plan: On-site Sampling

Task	Description for on-site sampling	Type	Level of Protection: Primary	Level of Protection: Contingency	Date of Activities
1	Soil/ground water sampling (Geoprobe™)	[X] Intrusive [ ] Nonintrusive	[ ] C [X] D [ ] Modified	[X] C [ ] D [ ] Modified	11/30-12/18/98
2	Soil/ground water sampling (drill rig)	[X] Intrusive [ ] Nonintrusive	[ ] C [X] D [ ] Modified	[X] C [ ] D [ ] Modified	11/30-12/18/98
3	Sediment/ surface water sampling	[X] Intrusive [ ] Nonintrusive	[ ] C [X] D [ ] Modified	[X] C [ ] D [ ] Modified	11/30-12/18/98
4	Biota sampling	[X] Intrusive [ ] Nonintrusive	[ ] C [X] D [ ] Modified	[X] C [ ] D [ ] Modified	11/30-12/18/98
5	Soil sampling (hand auger)	[X] Intrusive [ ] Nonintrusive	[ ] C [X] D [ ] Modified	[X] C [ ] D [ ] Modified	11/30-12/18/98

Site Personnel and Responsibilities (include subcontractors)

Employee Name			Task	Responsibilities
Fernando Iturralde	BR	Field Project Manager	1 - 5	Project Manager: Directs project investigation activities, makes site health and safety officer (SHSO) aware of pertinent project developments and plans, and maintains communications with client as necessary SHSO: Ensures that appropriate personal protective equipment (PPE) is available and enforces proper utilization of PPE by on-site personnel, suspends investigative work if site personnel are or may be exposed to an immediate health hazard, implements the health and safety plan, and reports any observed deviations from anticipated conditions described in the plan Field Personnel: Complete tasks as directed by project manager, field team leader, and SHSO; follows all procedures and guidelines established in the Tetra Tech health and safety program plan
Christina Riggins	TX	Project manager		
Troy Naquin	DN	Field team leader and SHSO		
Jerry Faucheux	BR	Field team leader		
Keith Brown	KC			
Kevin Cunningham	KC			
Steve Sinitiere	DN			
Kevin Almaguer	AL			
Cedric Cascio	TX			
Tom Wiberg	TX			
Lisa Stewart	TX			
Ryan Thompson	DN			
Cody Hernandez	DN			
Chad Young	HS			
Greg Brenham	NV			
Amanda Williams	TX			
Cynthia Woo	TX			
Jim Baker	HS			
Operational Technologies (subcontract)				

001505

Tetra Tech EM Inc.

HEALTH AND SAFETY PLAN

001506

PROTECTIVE EQUIPMENT: *Indicate type or material as necessary for each task.*

Column 1

Tasks: [X] All

Level: [ ] C [X] D [ ] Modified

[XX] Primary [ ] Contingency

RESPIRATORY		PROTECTIVE CLOTHING	
[XX]	Not Needed	[ ]	Not Needed
[ ]	APR:	[ ]	Tyvek Coverall:
[ ]	Cartridge:	[ ]	Saranex Coverall:
[ ]	Escape Mask:	[ ]	Coverall:
[ ]	Other:	[XX]	Other: Winter coveralls

HEAD AND EYE		GLOVES	
[ ]	Not Needed	[ ]	Not Needed
[XX]	Safety Glasses: Solids	[ ]	Undergloves:
[ ]	Face Shield:	[XX]	Gloves: Nitrile
[XX]	Goggles: Liquids	[ ]	Overgloves:
[XX]	Hard Hat: Overhead hazard		
[XX]	Other: Hearing protection		

FIRST AID EQUIPMENT		BOOTS	
[ ]	Not Needed	[ ]	Not Needed
[XX]	Standard First Aid Kit	[XX]	Boots: Steel toe/steel shank
[XX]	Portable Eyewash	[ ]	Overboots:

OTHER

[ ] Not Needed

[ ] (specify): ____

Column 2

Tasks: [X] All

Level: [X] C [ ] D [ ] Modified

[ ] Primary [XX] Contingency

RESPIRATORY		PROTECTIVE CLOTHING	
[ ]	Not Needed	[ ]	Not Needed
[XX]	APR: MSA Full face	[XX]	Tyvek Coverall:
[XX]	Cartridge: GMC-P100	[ ]	Saranex Coverall:
[ ]	Escape Mask:	[ ]	Coverall:
[ ]	Other:	[XX]	Other: Winter coveralls

HEAD AND EYE		GLOVES	
[ ]	Not Needed	[ ]	Not Needed
[XX]	Safety Glasses: Solids	[XX]	Undergloves: Nitrile
[ ]	Face Shield:	[ ]	Gloves:
[XX]	Goggles: Liquids	[XX]	Overgloves: Nitrile
[XX]	Hard Hat: Overhead hazard		
[XX]	Other: Hearing protection		

FIRST AID EQUIPMENT		BOOTS	
[ ]	Not Needed	[ ]	Not Needed
[XX]	Standard First Aid Kit	[XX]	Boots: Steel toe/steel shank
[XX]	Portable Eyewash	[XX]	Overboots: Liquids

OTHER

[ ] Not Needed

[ ] (specify): ____

Monitoring Equipment:

Instrument	Tasks	Instrument Reading	Action Guidelines	Comments
Combustible gas indicator Type:	☐ 1 through ☐ 5	0 - 10% LEL 10 - 25% LEL >25% LEL	No explosion hazard Potential explosion hazard; notify SHSO Explosion hazard; interrupt task; evacuate	☒ XX Not Needed
O_2 meter Type:	☐ 1 through ☐ 5	>23.5% O_2 23.5 - 19.5% O_2 <19.5% O_2	Potential fire hazard; evacuate site Oxygen normal Oxygen deficient; stop task; evacuate site; notify SHSO	☒ XX Not Needed
Radiation survey meter Type:	☐ 1 through ☐ 5	<2 mrem per hour 3 x Background >2 mrem per hour	Normal background Notify SHSO Interrupt task and evacuate	Note: Annual exposure not to exceed 1,250 mrem per quarter ☒ XX Not Needed
Photoionization detector ☐ 11.7 eV ☒ 10.2 eV ☐ 9.8 eV ☐ _____ eV Type: Foxboro TVA 1000 Dual PID/FID	☒ 1 ☒ 2 ☒ 5	Specify: >0 - 5 ppm above background >5 ppm to 20 ppm above background >20 ppm above background	Level D Level C Evacuate site	☐ Not Needed
Flame ionization detector Type: Foxboro TVA 1000 Dual PID/FID	☒ 1 ☒ 2 ☒ 5	Specify:		☐ Not Needed
Detector tubes Type: Type:	☐ 1 ☐ 2	Specify:		☒ XX Not Needed
Respirable dust monitor Type: PDM3 Miniram	☒ 1 ☒ 2	Specify: <0.0125 mg/m³ >0.0125 but ≤0.05 mg/m >0.05 mg/m³	Level D Level C	☐ Not Needed
Other Specify:	☐ 1 ☐ 2	Specify:		☒ XX Not Needed

001507

Contingency Plan	Emergency Contacts		Phone
Field personnel will follow emergency guidelines as outlined in (1) the Delatte Metals 1998 Contingency Plan and (2) Tetra Tech's Health and Safety Manual, dated July 1998.	U.S. Coast Guard National Response Center		1-800/424-8801
	Human Resources: Kate Gilmore		1-303/295-1101
	Health and Safety Director: Judy Wagner		1-847/255-4166
	CHEMTREC		1-800/424-9300
	Office health and safety coordinator:	Luis Vega	(214) 740-2007
	Project/site manager:	Fernando Iturralde	(504) 295 - 3933
	Site health and safety officer:	Troy Naquin	(318) 236-9194
	Fire department		911
	Police department		911

Personnel Decontamination and Disposal Method	MEDICAL EMERGENCY	
Personnel will follow EPA Standard Operating Safety Guides for decontamination procedures for modified Level D personnel protection (with Level C contingency). The following decontamination stations should be set up in a decontamination zone: • Segregated equipment drop • Boot and glove wash and rinse • Disposable glove, bootie, and overall removal and segregation • Safety glasses and hard hat removal • Hand and face wash and rinse If site conditions require a PPE upgrade to Level C, a station must be set up for respirator removal, decontamination, and cartridge disposal. All disposable equipment, clothing, and wash water will be double-bagged or containerized in an acceptable manner and disposed of by facility personnel.	Hospital	North Oaks Medical Center
	Hospital Address	15790 Medical Center Drive Hammond, LA 70403-1436
	Hospital Phone	Emergency - 911 General - (504) 345-2700
	Ambulance	911
	Route to hospital (see attached pages for hospital route map) Take Weinberger Road west until it turns north and becomes First Street. Go north to East Pine (Hwy 22), about 4 miles total. Turn west and follow East Pine to West Pine about 1.4 miles to SW Railroad (Hwy 51). Turn north onto Hwy 51 and go about 2.0 miles to Medical Center Drive. Turn west to 15790 Medical Center Drive.	

This Page Reserved for Site Map (if available)

SEE ATTACHED FIGURES

001509

This Page Reserved for Hospital Route Map (if available)

SEE ATTACHED FIGURES

APPROVAL AND SIGN-OFF FORM

PROJECT No. *G00DA002501*

I have read, understood, and agreed with the information set forth in this Health and Safety Plan and will follow the direction of the Site Health and Safety Officer as well as procedures and guidelines established in the Tetra Tech EM Inc. health and safety manual. I understand and am up-to-date with the training and medical requirements for this work

Name	Signature	Date
Name	Signature	Date
Name	Signature	Date

APPROVALS: ***(Two Signatures Required)***

FOR TROY NAQUIN, SHSO — 11/10/98

Site Health and Safety Officer — Date

11/10/98

Health and Safety Director or Designate — Date

001511

DEFINITIONS

Intrusive - Work involving excavation to any depth, drilling, opening of monitoring wells, most sampling, and Geoprobe work

Nonintrusive - Generally refers to site walk through or reconnaissance

Levels of Protection

Modified Level D - Hard hat, safety boots and glasses

Level D - Items listed for modified Level D above, *plus* protective clothing such as gloves, boot covers, Tyvek or Saranex coveralls

Modified Level C - Hard hat, safety boots and glasses, air purifying respirators with appropriate cartridge

Level C - Items listed for modified Level C above, *plus* protective clothing such as gloves, boot covers, Tyvek or Saranex coveralls

Emergency Contacts

CHEMTREC - For issues related to incidents involving the transportation of hazardous chemicals; this hotline provides assistance to those at the scene of an accident, 24 hours per day, 7 days per week.

U.S. Coast Guard National Response Center -For issues related to spill containment, cleanup, and damage assessment; this hotline will direct information to the appropriate state or region.

Health and Safety Plan (HSP) Short Form

- Used for ground water and surface soil sampling at a private residence
- Limitations:
  - No Level B or A
  - No confined space entry
  - No unexploded ordnance (UXO)

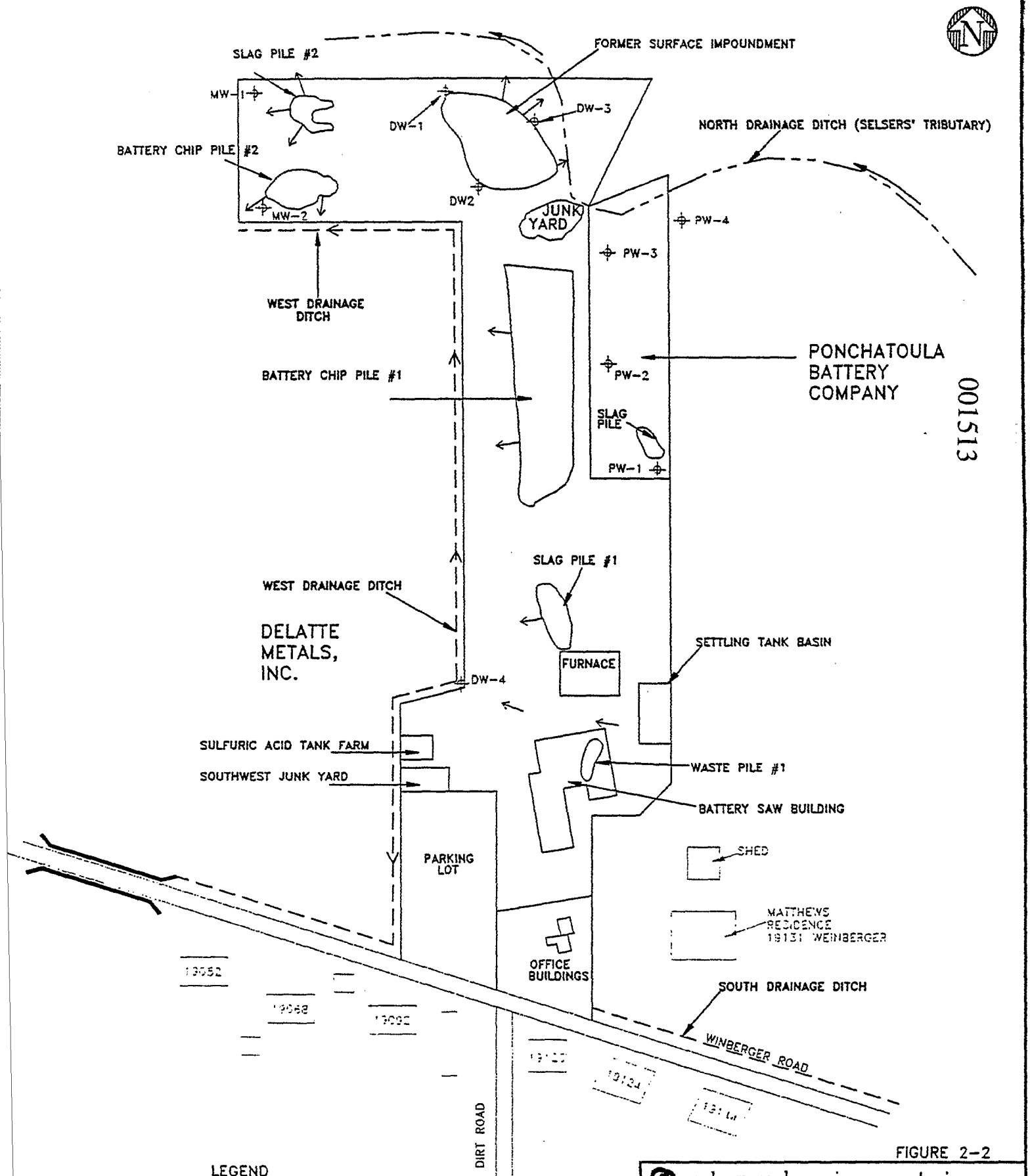

FIGURE 2-2

ecology and environment, inc.
Dallas, Texas
International Specialists in the Environment

SITE SKETCH
DELATTE METALS, INC.
PONCHATOULA, TANGIPAHOA PARISH, LA

TDD# S06-9608-013	Date: MARCH 06, 1997
PAN# 019201SIXX	P.M.: S. COWAN

YAHOO! YELLOW PAGES

Yellow Pages - Maps - People Search - Help

15790 Medical Center Dr, Hammond, LA New Search

001514

North Oaks Medical Ctr
15790 Medical Center Dr, Hammond, LA 70403
(504) 345-2700

Zoom Out ◄◄◄◄◄◄◄●►►►► Zoom In Printable Map

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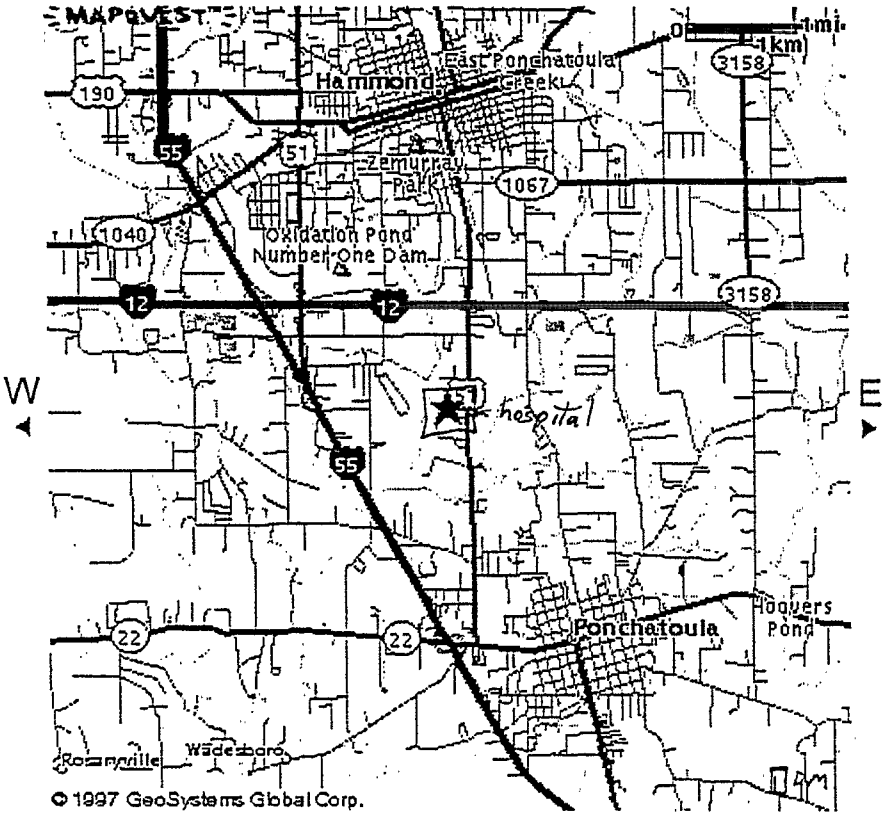


S

Driving Directions	Find Nearby Businesses

TETRA TECH, INC.
HEALTH AND SAFETY MANUAL
VOLUME II

SAFE WORK PRACTICES (SWP)

SAFE DRILLING PRACTICES

SWP NO.: 5-3

ISSUE DATE: JULY 1998

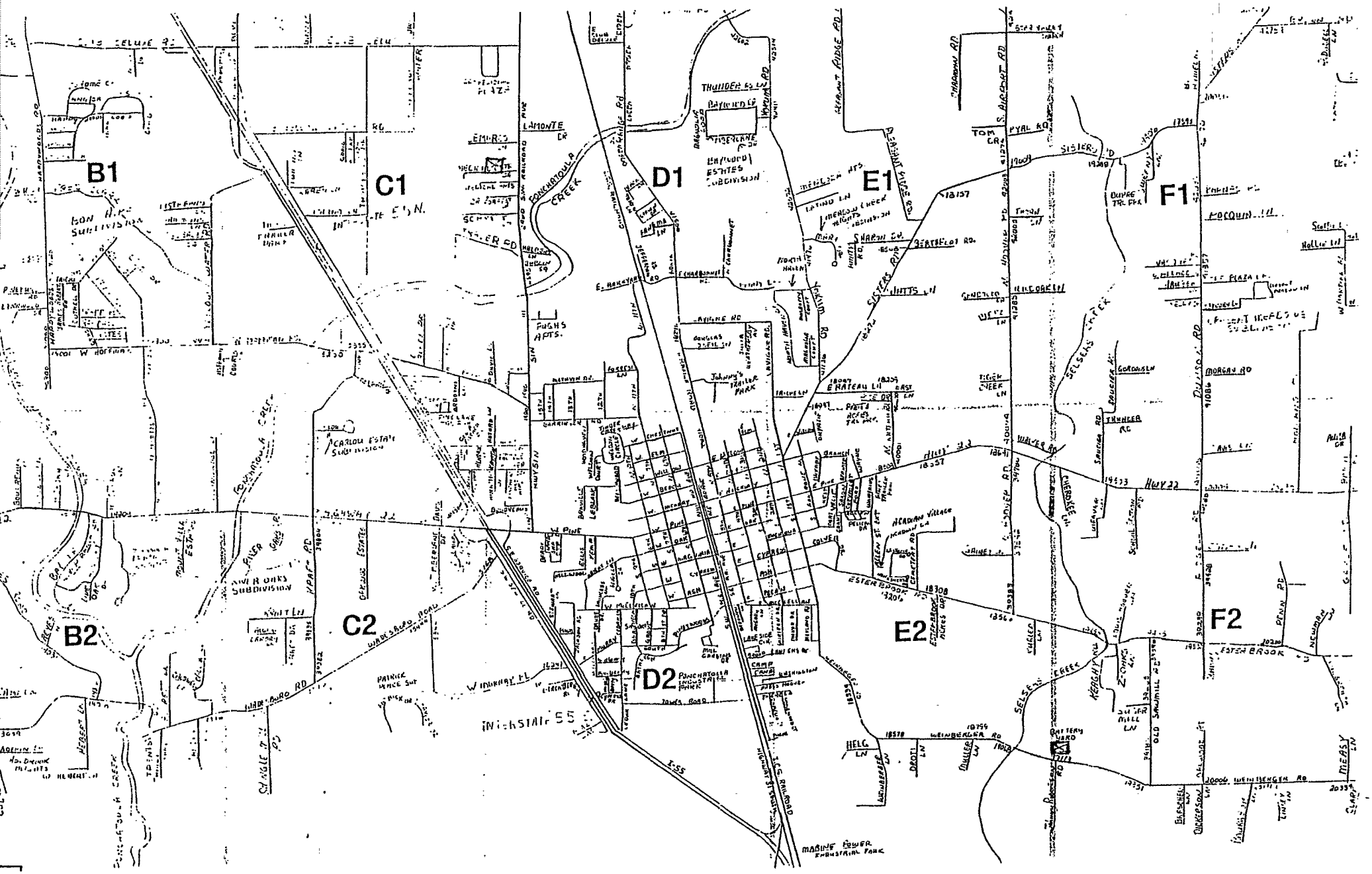
REVISION NO.: 1

Route to North Oaks Medical Center

001516

☒ Hospital

☒ Delatte Metals



SAFE DRILLING PRACTICES

This document establishes safe work practices (SWP) to follow during drilling operations. These SWPs are based on suggested safety procedures provided in the National Drilling Association's "Drilling Safety Guide." Procedures to follow before, during, and after drilling are listed below.

Before beginning any drill operation, each employee must be aware of the following:

- Wear a hard hat, safety glasses or goggles, steel-toed work boots, a shirt and full-length pants when working with or near the drill rig. Shirts must be tucked in at the belt.
- Do not wear loose or frayed clothing, loose long hair, or loose jewelry while working with rotating equipment.
- Do not eat, drink, or smoke near the drill rig.
- Identify all underground utility and buried structure locations before drilling.
- Ensure that the drill rig and any other machinery used is inspected daily by competent, qualified individuals. The site safety coordinator (SSC) will ensure compliance with this precaution.
- Drill rig operators will be instructed to report any abnormalities, such as equipment failure, oozing liquids, and unusual odors, to their supervisors or the SSC.
- Establish hand-signal communications for use when verbal communication is difficult. One person per work team will be designated to give hand signals to equipment operators.

While the drill rig is operating, employees should be aware of the following:

- Wear appropriate respiratory and personal protective equipment (PPE) when conditions warrant their use.
- Avoid direct contact with known or suspected contaminated surfaces.
- Move tools, materials, cords, hoses, and debris to prevent tripping hazards and contact with moving drill rig parts.
- Adequately secure tools, materials, and equipment subject to displacement or falling.
- Store flammable materials away from ignition sources and in approved containers.

- Maintain adequate clearance of the drill rig and mast from overhead transmission lines. The minimum clearance is 25 feet unless special permission is granted by the utility company. Call the local utility company for proper clearance.
- Only qualified and licensed personnel should operate drill rigs.
- Workers should not assume that the drill rig operator is keeping track of their exact location. Workers should never walk directly behind or beside heavy equipment without the operator's knowledge.
- Workers should maintain visual contact with drill rig operators at all times.
- When an operator must maneuver equipment in tight quarters, the presence of a second person is required to ensure adequate clearance. If much backing is required, two ground guides will be used: one in the direction the equipment is moving, and the other in the operator's normal field of vision to relay signals.
- Auger sections and other equipment are extremely heavy. All lifting precautions should be taken before moving heavy equipment. Appropriate equipment, such as chains, hoists, straps, and other equipment, should be used to safely transport heavy equipment too heavy to safely lift.
- Proper personal lifting techniques will be used. Workers should lift using their legs, not their backs.
- Workers will not use equipment they are not familiar with. This precaution applies to heavy as well as light equipment.
- All personnel not essential to work activities will be kept out of the work area.
- Workers will be aware of their footing at all times.
- Workers will remain alert at all times.

After drilling operations are completed, employees should do the following:

- Shut down machinery before repairing or lubricating parts (except parts that must be in motion for lubrication).
- Shut down mechanical equipment prior to and during fueling operations. When refueling or transferring fuel, containers and equipment must be bonded to prevent the buildup of static electricity.
- Keep drill rigs in the exclusion zone until work has been completed. Such equipment should then be decontaminated within the designated decontamination area.

- Engage parking brakes when equipment is not in use.

- Implement an ongoing maintenance program for all tools and equipment. All tools and moving equipment should be inspected regularly to ensure that parts are secured, are intact, and have no cracks or areas of weakness. The equipment must turn smoothly without wobbling and must operate in accordance with manufacturer specifications. Defective items should be promptly repaired or replaced. Maintenance and repair logs will be kept.

- Store tools in clean, secure areas to prevent damage, loss, or theft.

001520

Alconox ®

MATERIAL SAFETY DATA SHEET

Alconox, Inc.
9 East 40th Street, Suite 200
New York, NY 10016

I. IDENTIFICATION

Product Name (as appears on label)	ALCONOX
CAS Registry Number:	Not Applicable
Effective Date:	January 1, 1998
Chemical Family:	Anionic Powdered Detergent

II. HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

There are no hazardous ingredients in ALCONOX as defined by the OSHA Standard and Hazardous Substance List 29 CFR 1910 Subpart Z.

III. PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point (F):	Not Applicable
Vapor Pressure (mm Hg):	Not Applicable
Vapor Density (AIR=1):	Not Applicable
Specific Gravity (Water=1):	Not Applicable
Melting Point:	Not Applicable
Evaporation Rate (Butyl Acetate=1):	Not Applicable
Solubility in Water:	Appreciable-Soluble to 10% at ambient conditions
Appearance:	White powder interspersed with cream colored flakes.

IV. FIRE AND EXPLOSION DATA

Flash Point (Method Used):	None
Flammable Limits:	LEL: No Data UEL: No Data
Extinguishing Media:	Water, dry chemical, CO_2, foam
Special Firefighting Procedures:	Self-contained positive pressure breathing apparatus and protective clothing should be worn when fighting fires involving chemicals.
Unusual Fire and Explosion Hazards:	None

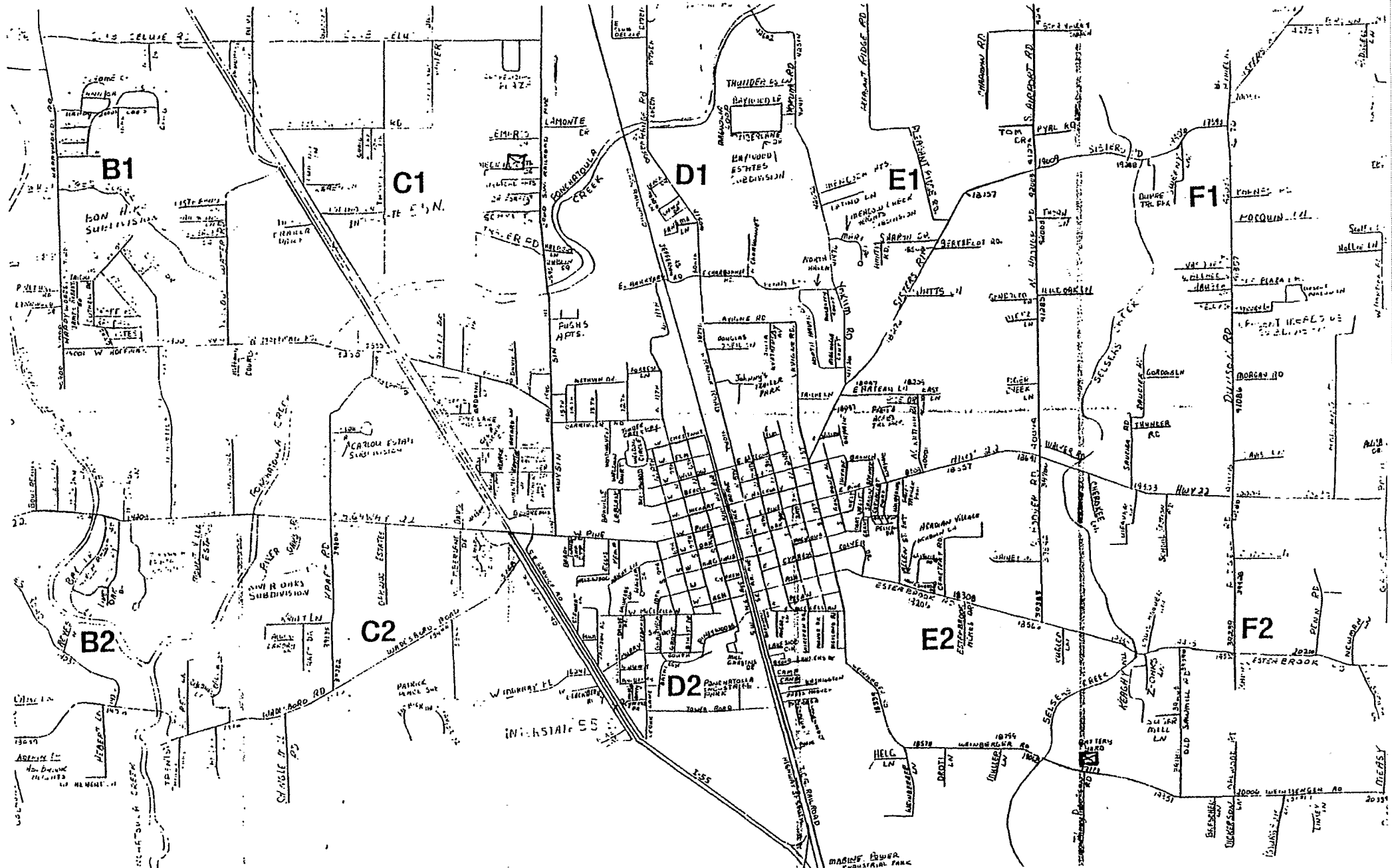
V. REACTIVITY DATA

001521

Route to North Oaks Medical Center

☒ Hospital

☒ Delatte Metals



Alconox ®

MATERIAL SAFETY DATA SHEET

001522

Alconox, Inc.
9 East 40th Street, Suite 200
New York, NY 10016

I. IDENTIFICATION

Product Name (as appears on label)	ALCONOX
CAS Registry Number:	Not Applicable
Effective Date:	January 1, 1998
Chemical Family:	Anionic Powdered Detergent

II. HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

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Flammable Limits:	LEL: No Data UEL: No Data
Extinguishing Media:	Water, dry chemical, CO_2, foam
Special Firefighting Procedures:	Self-contained positive pressure breathing apparatus and protective clothing should be worn when fighting fires involving chemicals.
Unusual Fire and Explosion Hazards:	None

V. REACTIVITY DATA

Stability:	Stable
Hazardous Polymerization:	Will not occur
Incompatibility (Materials to Avoid):	None
Hazardous Decomposition or Byproducts:	May release CO_2 on burning

VI. HEALTH HAZARD DATA

Route(s) of Entry:	Inhalation? Yes Skin? No Ingestion? Yes
Health Hazards (Acute and Chronic):	Inhalation of powder may prove locally irritating to mucous membranes. Ingestion may cause discomfort and/or diarrhea. Eye contact may prove irritating.
Carcinogenicity:	NTP? No IARC Monographs? No OSHA Regulated? No
Signs and Symptoms of Exposure:	Exposure may irritate mucous membranes. May cause sneezing.
Medical Conditions Generally Aggravated by Exposure:	Not established. Unnecessary exposure to this product or any industrial chemical should be avoided. Respiratory conditions may be aggravated by powder.
Emergency and First Aid Procedures:	Eyes: Immediately flush eyes with water for at least 15 minutes. Call a physician. Skin: Flush with plenty of water. Ingestion: Drink large quantities of water or milk. Do not induce vomiting. If vomiting occurs readminister fluids. See a physician for discomfort.

VII. PRECAUTIONS FOR SAFE HANDLING AND USE

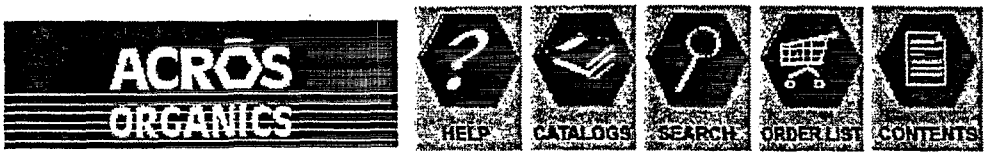
Steps to be Taken if Material is Released or Spilled:	Material foams profusely. Recover as much as possible and flush remainder to sewer. Material is biodegradable.
Waste Disposal Method:	Small quantities may be disposed of in sewer. Large quantities should be disposed of in accordance with local ordinances for detergent products.
Precautions to be Taken in Storing and Handling:	Material should be stored in a dry area to prevent caking.
Other Precautions:	No special requirements other than the good industrial hygiene and safety practices employed with any industrial chemical.

VIII. CONTROL MEASURES

001524

Respiratory Protection (Specify Type):	Dust mask - Recommended
Ventilation:	Local Exhaust-Normal Special-Not Required Mechanical-Not Required Other-Not Required
Protective Gloves:	Impervious gloves are useful but not required.
Eye Protection:	Goggles are recommended when handling solutions.
Other Protective Clothing or Equipment:	None
Work/Hygienic Practices:	No special practices required

THE INFORMATION HEREIN IS GIVEN IN GOOD FAITH BUT NO WARRANTY IS EXPRESSED OR IMPLIED.



001525

MATERIAL SAFETY DATA SHEET

Nitric Acid, Reagent ACS
96317

**** SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION ****

MSDS Name: Nitric Acid, Reagent ACS

Azotic Acid, Engravers Nitrate, Hydrogen Nitrate.
Company Identification: Acros Organics N.V.
One Reagent Lane
Fairlawn, NJ 07410
For information in North America, call: 800-ACROS-01
For emergencies in the US, call CHEMTREC: 800-424-9300

**** SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS ****

CAS#	Chemical Name	%	EINECS#
7697-37-2	Nitric acid	69-71%	231-714-2
7732-18-5	Water	Balance	231-791-2

Hazard Symbols: O C
Risk Phrases: 35 8

**** SECTION 3 - HAZARDS IDENTIFICATION ****

EMERGENCY OVERVIEW

Appearance: clear colorless to pale yellow.
Danger! Strong oxidizer. Contact with other material may cause a fire. Corrosive. Causes eye and skin burns. Causes digestive and respiratory tract burns. May be fatal if inhaled.
Target Organs: None.

Potential Health Effects

Eye:
Causes severe eye burns. May cause irreversible eye injury.

Skin:
May cause severe skin irritation. Causes skin burns. May cause deep, penetrating ulcers of the skin.

Ingestion:
Causes gastrointestinal tract burns. May cause perforation of the digestive tract.

Inhalation:
May be fatal if inhaled. Effects may be delayed. May cause irritation of the respiratory tract with burning pain in the nose and throat, coughing, wheezing, shortness of breath and pulmonary edema.

Chronic:

Repeated inhalation may cause chronic bronchitis. Repeated exposure may cause erosion of teeth.

**** SECTION 4 - FIRST AID MEASURES ****

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Eyes:
Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Get medical aid immediately. Do NOT allow victim to rub or keep eyes closed.

Skin:
Get medical aid immediately. Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse. Destroy contaminated shoes.

Ingestion:
If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately. Do NOT induce vomiting and seek IMMEDIATE MEDICAL ADVICE.

Inhalation:
Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid. DO NOT use mouth-to-mouth respiration.

Notes to Physician:
Treat symptomatically and supportively.

**** SECTION 5 - FIRE FIGHTING MEASURES ****

General Information:
As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Strong oxidizer. Contact with combustible materials may cause a fire. Use water spray to keep fire-exposed containers cool. Substance is noncombustible. Containers may explode in the heat of a fire.

Extinguishing Media:
Substance is noncombustible; use agent most appropriate to extinguish surrounding fire. Do NOT get water inside containers. For large fires, use water spray, fog or alcohol-resistant foam. Do NOT use straight streams of water. For small fires, use dry chemical, carbon dioxide, sand, earth, water spray or regular foam. Cool containers with flooding quantities of water until well after fire is out.

Autoignition Temperature: Not available.
Flash Point: Not available.
NFPA Rating: Not published.
Explosion Limits, Lower: Not available.
Upper: Not available.

**** SECTION 6 - ACCIDENTAL RELEASE MEASURES ****

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:
Absorb spill with inert material, (e.g., dry sand or earth), then place into a chemical waste container. Wear a self contained breathing apparatus and appropriate Personal protection. (See Exposure Controls, Personal Protection section). Neutralize spill with sodium bicarbonate. Use water spray to disperse the gas/vapor. Remove all sources of ignition. Use a spark-proof tool.

**** SECTION 7 - HANDLING and STORAGE ****

Handling:
Wash thoroughly after handling. Remove contaminated clothing and

wash before reuse. Use with adequate ventilation. Ground and bond containers when transferring material. Keep container tightly closed. Do not get on skin or in eyes. Do not ingest or inhale.

Storage:

Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Corrosives area.

**** SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION ****

Engineering Controls:

Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Nitric acid	2 ppm ; 5.2 mg/m3; 4 ppm STEL; 10 mg/m3 STEL	2 ppm TWA; 5 mg/m3 TWA 25 ppm IDLH	2 ppm TWA; 5 mg/m3 TWA
Water	none listed	none listed	none listed

OSHA Vacated PELs:

Nitric acid:

2 ppm TWA; 5 mg/m3 TWA

Water:

No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes:

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin:

Wear appropriate protective gloves and clothing to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

**** SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES ****

Physical State:	Liquid
Appearance:	clear colorless to pale yellow
Odor:	strong odor, acrid odor
pH:	1.0
Vapor Pressure:	6.8 mm Hg
Vapor Density:	Not available.
Evaporation Rate:	Not available.
Viscosity:	Not available.
Boiling Point:	72 deg C
Freezing/Melting Point:	-42 deg C
Decomposition Temperature:	Not available.
Solubility:	Soluble in water.

Specific Gravity/Density: 1.50
Molecular Formula: HNO3
Molecular Weight: 63.0119

**** SECTION 10 - STABILITY AND REACTIVITY ****

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Chemical Stability:
Decomposes when in contact with air, light, or organic matter.
Conditions to Avoid:
High temperatures, incompatible materials, moisture, reducing agents.
Incompatibilities with Other Materials:
Reacts with over 150 chemical combinations. Refer to NFPA Fire Protection Guide for specifics. Reacts explosively with organic materials and combustibles.
Hazardous Decomposition Products:
Nitrogen oxides.
Hazardous Polymerization: Has not been reported.

**** SECTION 11 - TOXICOLOGICAL INFORMATION ****

RTECS#:
CAS# 7697-37-2: QU5775000 QU5900000
CAS# 7732-18-5: ZC0110000
LD50/LC50:
CAS# 7697-37-2: Inhalation, rat: LC50 =67 ppm(NO2)/4H.
CAS# 7732-18-5: Oral, rat: LD50 = >90 mL/kg.
Carcinogenicity:
Nitric acid -
Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.
Water -
Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.
Epidemiology:
No information available.
Teratogenicity:
Effects on newborn: biochemical and metabolic, Oral-rat TDLo=2345 mg/kg (female 18D post). Fetotoxicity: Stunted fetus, Oral-rat TDLo=21150 mg/kg (female 1-21D post).
Reproductive Effects:
No information available.
Neurotoxicity:
No information available.
Mutagenicity:
No information available.
Other Studies:
None.

**** SECTION 12 - ECOLOGICAL INFORMATION ****

Ecotoxicity:
Mosquito fish: TLm=72 ppm/96H (fresh water) Cockle: LC50=330-1000 ppm/48H (salt water)
Environmental Fate:
No information reported.
Physical/Chemical:
No information available.
Other:
None.

**** SECTION 13 - DISPOSAL CONSIDERATIONS ****

Dispose of in a manner consistent with federal, state, and local regulations.
RCRA D-Series Maximum Concentration of Contaminants:
None listed.
RCRA D-Series Chronic Toxicity Reference Levels: None listed.

RCRA F-Series: None listed.
RCRA P-Series: None listed.
RCRA U-Series: None listed.
Not listed as a material banned from land disposal
according to RCRA.

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**** SECTION 14 - TRANSPORT INFORMATION ****

US DOT
Shipping Name: NITRIC ACID
Hazard Class: 8
UN Number: UN2031
Packing Group: II
IMO
Shipping Name: NITRIC ACID
Hazard Class: 8
UN Number: 2031
Packing Group: II
IATA
Shipping Name: NITRIC ACID
Hazard Class: 8
UN Number: 2031
Packing Group: II
RID/ADR
Shipping Name: NITRIC ACID
Dangerous Goods Code: 8(2B)
UN Number: 2031
Canadian TDG
Shipping Name: NITRIC ACID
Hazard Class: 8(9.2)
UN Number: UN2031

**** SECTION 15 - REGULATORY INFORMATION ****

US FEDERAL
TSCA
CAS# 7697-37-2 is listed on the TSCA inventory.
CAS# 7732-18-5 is listed on the TSCA inventory.
Health & Safety Reporting List
None of the chemicals are on the Health & Safety Reporting List.
Chemical Test Rules
None of the chemicals in this product are under a Chemical Test Rule.
Section 12b
None of the chemicals are listed under TSCA Section 12b.
TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.
SARA
Section 302 (RQ)
CAS# 7697-37-2: final RQ = 1000 pounds (454 kg)
Section 302 (TPQ)
CAS# 7697-37-2: TPQ = 1000 pounds; RQ = 1000 pounds
SARA Codes
CAS # 7697-37-2: acute, chronic, flammable.
Section 313
This material contains Nitric acid (CAS# 7697-37-2, 69 71%),which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.
Clean Air Act:
This material does not contain any hazardous air pollutants.
This material does not contain any Class 1 Ozone depletors.
This material does not contain any Class 2 Ozone depletors.
Clean Water Act:
CAS# 7697-37-2 is listed as a Hazardous Substance under the CWA.
None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

CAS# 7697-37-2 is considered highly hazardous by OSHA.

STATE

Nitric acid can be found on the following state right to know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

Water is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California No Significant Risk Level:

None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: O C

Risk Phrases:

R 35 Causes severe burns.

R 8 Contact with combustible material may cause fire.

Safety Phrases:

S 23 Do not inhale gas/fumes/vapour/spray.

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 36 Wear suitable protective clothing.

S 45 In case of accident of if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)

CAS# 7697-37-2: 1

CAS# 7732-18-5: No information available.

Canada

CAS# 7697-37-2 is listed on Canada's DSL/NDSL List.

CAS# 7732-18-5 is listed on Canada's DSL/NDSL List.

This product has a WHMIS classification of C, D1A, E.

CAS# 7697-37-2 is not listed on Canada's Ingredient Disclosure List.

CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.

Exposure Limits

CAS# 7697-37-2:. OEL-ARAB Republic of Egypt:TWA 2 ppm (5 mg/m3). OEL-AUSTRALIA:TWA 2 ppm (5 mg/m3);STEL 4 ppm (10 mg/m3). OEL-BELGIUM:TWA 2 ppm (5.2 mg/m3);STEL 4 ppm (10 mg/m3). OEL-CZECHOSLOVAKIA:TWA 2.5 mg/m3;STEL 5 mg/m3. OEL-DENMARK:TWA 2 ppm (5 mg/m3). OEL-FINLAND:TWA 2 ppm (5 mg/m3);STEL 5 ppm (13 mg/m3);Skin. OEL-FRANCE:TWA 2 ppm (5 mg/m3);STEL 4 ppm (10 mg/m3). OEL-GERMANY:TWA 10 ppm (25 mg/m3). OEL-HUNGARY:STEL 5 mg/m3. OEL-JAPAN:TWA 2 ppm (5.2 mg/m3). OEL-THE PHILIPPINES:TWA 2 ppm (5 mg/m3). OEL-POLAND:TWA 10 mg/m3. OEL-RUSSIA:TWA 2 ppm;STEL 2 mg/m3;Skin. OEL-SWEDEN:TWA 2 ppm (5 mg/m3);STEL 5 ppm (13 mg/m3). OEL-SWITZERLAND:TWA 2 ppm (5 mg/m3);STEL 4 ppm (1 mg/m3). OEL-THAILAND:TWA 2 ppm (5 mg/m3). OEL-TURKEY:TWA 2 ppm (5 mg/m3). OEL-UNITED KINGDOM:TWA 2 ppm (5 mg/m3);STEL 4 ppm (10 mg/m3). OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV. OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

**** SECTION 16 - ADDITIONAL INFORMATION ****

MSDS Creation Date: 2/01/1996 Revision #4 Date: 12/16/1997

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.

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1 - PRODUCT IDENTIFICATION

PRODUCT NAME: SODIUM HYPOCHLORITE, 5% SOLUTION
FORMULA: NAOCL
FORMULA WT: 74.44
CAS NO.: 7681-52-9
NIOSH/RTECS NO.: NH3486300
COMMON SYNONYMS: HYPOCHLOROUS ACID, SODIUM SALT; CLOROX
PRODUCT CODES: 9416
EFFECTIVE: 05/22/86
REVISION #01

PRECAUTIONARY LABELLING

BAKER SAF-T-DATA(TM) SYSTEM

HEALTH	-	1	SLIGHT
FLAMMABILITY	-	0	NONE
REACTIVITY	-	1	SLIGHT
CONTACT	-	1	SLIGHT

HAZARD RATINGS ARE 0 TO 4 (0 = NO HAZARD; 4 = EXTREME HAZARD).

LABORATORY PROTECTIVE EQUIPMENT

SAFETY GLASSES; LAB COAT

PRECAUTIONARY LABEL STATEMENTS

WARNING
CAUSES BURNS
HARMFUL IF SWALLOWED

AVOID CONTACT WITH EYES, SKIN, CLOTHING.
AVOID BREATHING VAPOR. KEEP IN TIGHTLY CLOSED CONTAINER. USE WITH ADEQUATE VENTILATION. WASH THOROUGHLY AFTER HANDLING.

SAF-T-DATA(TM) STORAGE COLOR CODE: ORANGE (GENERAL STORAGE)

2 - HAZARDOUS COMPONENTS

COMPONENT	%	CAS NO.
SODIUM HYPOCHLORITE	0-5	7681-52-9

3 - PHYSICAL DATA

BOILING POINT: N/A
MELTING POINT: N/A
SPECIFIC GRAVITY: 1.09
VAPOR PRESSURE(MM HG): 18
VAPOR DENSITY(AIR=1): 2.5
EVAPORATION RATE: N/A

(H2O=1) (BUTYL ACETATE=1)

SOLUBILITY(H2O): APPRECIABLE (MORE THAN 10 %) % VOLATILES BY VOLUME: 100

APPEARANCE & ODOR: LIGHT YELLOW TO CLEAR LIQUID.

---

4 - FIRE AND EXPLOSION HAZARD DATA

001532

FLASH POINT (CLOSED CUP N/A

FLAMMABLE LIMITS: UPPER - N/A % LOWER - N/A %

FIRE EXTINGUISHING MEDIA
USE EXTINGUISHING MEDIA APPROPRIATE FOR SURROUNDING FIRE.

SPECIAL FIRE-FIGHTING PROCEDURES
FIREFIGHTERS SHOULD WEAR PROPER PROTECTIVE EQUIPMENT AND SELF-CONTAINED BREATHING APPARATUS WITH FULL FACEPIECE OPERATED IN POSITIVE PRESSURE MODE.

TOXIC GASES PRODUCED
CHLORINE AND CHLORINE COMPOUNDS

---

5 - HEALTH HAZARD DATA

CARCINOGENICITY: NTP: NO IARC: NO Z LIST: NO OSHA REG: NO

EFFECTS OF OVEREXPOSURE
LIQUID MAY CAUSE BURNS TO SKIN AND EYES.
VAPORS MAY BE IRRITATING TO SKIN, EYES, NOSE AND THROAT.
INGESTION MAY CAUSE SEVERE BURNING OF MOUTH AND STOMACH.

TARGET ORGANS
NONE IDENTIFIED

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE
NONE IDENTIFIED

ROUTES OF ENTRY
NONE INDICATED

EMERGENCY AND FIRST AID PROCEDURES
CALL A PHYSICIAN.
IF SWALLOWED, IF CONSCIOUS, GIVE LARGE AMOUNT OF MILK, MILK OF MAGNESIA, OR WHITES OF EGGS BEATEN WITH WATER. INDUCE VOMITING.
IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN.
IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES OR SKIN WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED CLOTHING AND SHOES.
WASH CLOTHING BEFORE RE-USE.

---

6 - REACTIVITY DATA

STABILITY: STABLE HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

CONDITIONS TO AVOID: MOISTURE, HEAT, LIGHT

INCOMPATIBLES: STRONG ACIDS, CHLORINE, STRONG REDUCING AGENTS, ORGANIC MATERIALS, ALUMINUM

DECOMPOSITION PRODUCTS: CHLORINE AND CHLORINE COMPOUNDS

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7 - SPILL AND DISPOSAL PROCEDURES

STEPS TO BE TAKEN IN THE EVENT OF A SPILL OR DISCHARGE
WEAR SUITABLE PROTECTIVE CLOTHING. TAKE UP WITH SAND OR OTHER NONCOMBUSTIBLE ABSORBENT MATERIAL AND PLACE INTO CONTAINER FOR LATER DISPOSAL. FLUSH SPILL AREA WITH WATER.

DISPOSAL PROCEDURE
DISPOSE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL ENVIRONMENTAL REGULATIONS.

---

8 - PROTECTIVE EQUIPMENT

VENTILATION: USE ADEQUATE GENERAL OR LOCAL EXHAUST VENTILATION TO KEEP VAPOR AND MIST LEVELS AS LOW AS POSSIBLE.

RESPIRATORY PROTECTION: NONE REQUIRED WHERE ADEQUATE VENTILATION CONDITIONS EXIST. IF AIRBORNE CONCENTRATION IS HIGH, USE AN APPROPRIATE RESPIRATOR OR DUST MASK.

EYE/SKIN PROTECTION: SAFETY GOGGLES, UNIFORM, APRON, RUBBER GLOVES ARE RECOMMENDED.

---

9 - STORAGE AND HANDLING PRECAUTIONS

SAF-T-DATA(TM) STORAGE COLOR CODE: ORANGE (GENERAL STORAGE)

SPECIAL PRECAUTIONS
KEEP CONTAINER TIGHTLY CLOSED. SUITABLE FOR ANY GENERAL CHEMICAL STORAGE AREA.

---

10 - TRANSPORTATION DATA AND ADDITIONAL INFORMATION

DOMESTIC (D.O.T.)

PROPER SHIPPING NAME	HYPOCHLORITE SOLUTION (< 7% CL BY WT.)(AIR ONLY)
HAZARD CLASS	ORM-B
UN/NA	NA1791
LABELS	NONE
REPORTABLE QUANTITY	100 LBS.

INTERNATIONAL (I.M.O.)

PROPER SHIPPING NAME	HYPOCHLORITE, SOLUTION (> 5% AVAILABLE CHLORINE)
HAZARD CLASS	8
UN/NA	UN1791
LABELS	CORROSIVE

SITE MANAGEMENT PLAN
FOR
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
DELATTE METALS, PONCHATOULA, LOUISIANA

Prepared for

U.S. Environmental Protection Agency
1445 Ross Avenue
Dallas, Texas 75202-2733

Work Assignment No.	:	025-RICO-06DF
EPA Region	:	6
Date Prepared	:	November 10, 1998
Contract No.	:	68-W6-0037
Prepared By	:	Tetra Tech EM Inc.
Tetra Tech Project Manager	:	Ms. Christina Riggins
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CONTENTS

1.0 INTRODUCTION

Tetra Tech EM Inc. (Tetra Tech) received Work Assignment No. 025-RICO-06DF from the U.S. Environmental Protection Agency (EPA) under Response Action Contract (RAC) No. 68-W6-0037. Under this work assignment, Tetra Tech is directed to conduct a Remedial Investigation/Feasibility Study (RI/FS) at Delatte Metals, Inc. (DM), in Ponchatoula, Tangipahoa Parish, Louisiana. This site management plan (SMP) has been prepared in accordance with the objectives of the statement of work (SOW) dated September 17, 1998. The purpose of the SMP is to provide the guidelines for handling access, security, contingency procedures, and management responsibilities.

The primary purposes of site security controls are to establish the hazardous area perimeter, reduce contaminant transport into clean areas, prevent access or exposure to hazardous materials by unauthorized persons, and protect materials and equipment.

The DM site will include three (3) separate work zones. This plan will discuss entry and exit procedures to and from these zones. Site work zones will include (1) site support areas, (2) contamination reduction zones (CRZ), and (3) exclusion zones.

The contractor is ultimately responsible for the security of the sampling equipment, vehicles, and other equipment on site.

2.0 BACKGROUND

The DM site covers about 17.6 acres and is located on the north side of Weinberger Road, about 1.5 miles southeast of Ponchatoula at 1540 Weinberger Road, in Ponchatoula, Tangipahoa Parish, Louisiana. Battery recycling and smelting operations began at the site in 1970 under the name Delatte Fuscia Battery Company; operations continued until 1993. Site operations resulted in the generation of several wastes streams containing heavy metals and acids. These wastes were stored throughout the facility in several waste piles, a concrete settling basin, and an earthen impoundment. In 1987, DM closed the impoundment after excavating the sludge and backfilling with clean soil. Waste piles that contain slag, dust, and battery chips, currently remain on site.

DM currently accepts spent lead-acid batteries for recycling; however, spent lead batteries are only stored on site until a full truck or trailer load is accumulated. The truck or trailer load of spent lead batteries is then sent to another reclaimer for processing. The site contains a former surface impoundment, junk yards, a tank battery, a reverbatory furnace, a battery saw building, slag piles, battery chip piles, an abandoned house, miscellaneous equipment, and an office building.

3.0 SECURITY OBJECTIVES

The objectives of implementing site security measures are as follows.

- Prevent and detect theft, sabotage, vandalism, and arson
- Prevent unauthorized people from entering the site and becoming injured
- Prevent unauthorized people from entering the site and removing equipment or hazardous substances
- Prevent unauthorized people from taking actions at the site that might exacerbate the environmental problem or interfere with the investigation
- Protect file information
- Avoid unauthorized dumping

4.0 SECURITY MEASURES

Security measures at the site may include fences, site access controls, signs, and police notification procedures.

4.1 FENCES

The site has a 6-foot-tall fence on its west and south sides. No fence exists on the east or north sides of the facility. Vehicular access to the site is restricted by a locking gate at the entrance drive; however, the site is accessible on foot by walking through the Ponchatoula Battery Company or crossing the northern tributary to Selsers Creek. Personnel entry or exit will not be permitted through the east or north sides of the facility. Typical access will be through the main entrance gate for project personnel.

4.2 SITE ACCESS CONTROLS

At night and whenever work is not being performed on site, the facility gates will be locked. Storable tools, instruments, and equipment will be removed from site on a daily basis. All other equipment will be stored inthe general support area. The Field Manager (FM) shall check the site on a regular basis.

Restricted access will be maintained at the main gate entrance and the FM or the Site Health and Safety Officer (SHSO) will be responsible for controlling unauthorized entry during work hours. Should persons attempt unauthorized site entry, the FM will be responsible for taking appropriate action. The FM or SHSO will be responsible for logging in equipment, material, visitors to the site, vehicles, trucks, and drill rigs arriving and departing the site.

4.3 SIGNS

The FM will post signs at the perimeter of the site at 150-foot intervals along the unfenced line. The signs will indicate that a hazardous area is ahead and that unauthorized entry is prohibited. These signs shall state: (1) DANGER, (2) UNAUTHORIZED PERSONNEL KEEP OUT, or (3) WARNING! HAZARDOUS WORK AREA-DO NOT ENTER WITHOUT AUTHORIZATION.

Signs shall also be posted directing visitors to the authorized main entrance for check in.

4.4 NOTIFICATION

The FM will notify the police about the scope of the project, the requirements, and the security measurements to be taken during the RI/FS.

5.0 SUPPORT AREAS

Support areas at the DM site include the general site support area and the limited access site support area.

5.1 GENERAL SITE SUPPORT AREA

The uncontaminated general site support area or "clean zone" will be the area by the front gate along Weinbarger Road. The area will be used for parking vehicles, command post location and temporary offices, sanitation facilities, and receipt of deliveries. Upon arrival, personnel entering the general site support area will be directed to sign the site entry and exit log (Form 0701A). Personnel entering this area may include sampling personnel, other subcontractors, and visitors.

5.2 LIMITED ACCESS SITE SUPPORT AREA

The limited access site support area will be located on a boundary of the site near the CRZ. There will be one controlled entry and exit point from the limited access site support area to the CRZ.

6.0 RESTRICTED ZONES

The exclusion zone and the CRZ are collectively referred to as the restricted zones. These areas are classified as restricted because they are known to be or may potentially be contaminated.

6.1 CONTAMINATION REDUCTION ZONE

The CRZ includes the personnel decontamination station (PDS) and equipment decontamination station (EDS). Personnel must enter and exit the exclusion zone through the PDS area. Before leaving the CRZ or demobilization, equipment will be decontaminated in the EDS before it is moved to the limited access or general site support area.

6.2 EXCLUSION ZONE

The exclusion zone requires that certain procedures be followed for zone entry, exit, emergency exit, and zone boundaries.

6.2.1 Entry

Entry to the exclusion zone will be made through the CRZ. Personnel will be required to sign the exclusion zone entry and exit log (Form 0702) located at the PDS. Temporary fences may be constructed around certain exclusion zones. These fences are considered safety precautions rather than security measures.

6.2.2 Exit

Personnel and equipment must be decontaminated before exiting the exclusion zone. Zones will be clearly separated and marked to ensure that no one unknowingly enters a zone.

6.2.3 Emergency Exit

The main entrance will be used as the emergency exit and will be kept clear of obstructions during all field activities. The gate at the main exit will be kept unlocked during field activities and will be locked at the end of each day by the FM. The FM and SHSO will have keys to the main gate.

6.2.4 Zone Boundaries

As work progresses, the exclusion zones may change or decrease in size; this determination shall be made by the SHSO. Site personnel shall be informed of changes in the size and location of the exclusion zone.

7.0 VISITORS

- Site personnel and visitors shall be required to log in (Form 0701) at the main enhance.
- Visitors must be approved by the FM or EPA or state project representative.
- Visitors shall park in the visitors parking lot.
- Visitors will be required to read and sign the furnished synopsis of the HSP before entering the site.
- Each visitor will be required to wear visitor's identification, which will be provided at the site support area.

- Visitors will be informed about the applicable procedures and location of hard hats, glasses, protective clothing, and boots as well as procedures for entry. Visitors must wear all required equipment when entering hazardous areas.
- In addition to the above requirements, visitors must provide evidence of completion of an OSHA-approved 40-hour health and safety training before entering hazardous areas.
- Visitors must be escorted at all times, except EPA and state employees and representatives, who may proceed without escorts.

8.0 EMERGENCY ACTIONS

The FM will coordinate all Parish law enforcement activities at the site and will coordinate with the State Highway Patrol and emergency units, fire department, and paramedics for on-site emergencies. Smoke, fires, explosions, releases of air contaminants, flooding, and other emergency conditions observed shall be reported to the FM and, if needed, to emergency agencies.

9.0 EMERGENCY ADDRESS LIST

Contact information for hospital services, ambulance service, law enforcement, and the local fire station is as follows:

- Hospital Services

  Hospital: North Oaks Medical Center
  Location: 15790 Medical Center Drive, Hammond, LA
  Phone: (504) 230-1370; (504) 345-2700

- Ambulance Service

  Call: 911

- Law Enforcement

  Ponchatoula Police Department
  Phone: (504) 386-6548
  Emergency Phone: 911

- Fire Station

Fire Department: Ponchatoula Fire Department
Phone: (504) 386-6548
Emergency Phone: 911

POLLUTION CONTROL AND MITIGATION PLAN
FOR
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
DELATTE METALS, PONCHATOULA, LOUISIANA

Prepared for

U.S. Environmental Protection Agency
1445 Ross Avenue
Dallas, Texas 75202-2733

Work Assignment No.	:	025-RICO-06DF
EPA Region	:	6
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1.0 INTRODUCTION

Tetra Tech EM, Inc. (Tetra Tech) received Work Assignment No. 025-RICO-06DF from the U.S. Environmental Protection Agency (EPA) under Response Action Contract (RAC) No. 68-W6-0037. Under this work assignment, Tetra Tech is directed to implement a Remedial Investigation/Feasibility Study (RI/FS) at Delatte Metals, Inc. (DM).

Delatte Metals is located in Ponchatoula, in southern Tangipahoa Parish, Louisiana. The site is bordered by a residence and a wooded area to the west, a wetland and woods to the east, and residences to the north and south. The site was used as a lead battery recycling and smelting facility from 1970 until 1993.

This Pollution Control and Mitigation Plan summarizes the requirements and procedures incorporated into the RI/FS to (1) protect the environment during the RI/FS and (2) maintain or restore the environment to its natural state, to the extent possible, following the RI/FS. Design requirements regarding the RI/FS elements are intended to provide protection to the environment during the RI/FS, and include transportation and evacuation of contaminated waste and equipment decontamination. If the FS includes an on-site treatability study, the following design requirements will protect the environment: (1) transportation and stockpiling of reagent and treated waste, (2) treatment and evacuation of contaminated waste, (3) equipment decontamination, (4) surface water runoff and erosion control, and (5) final grading to restore proper drainage and site appearance. This plan will be amended, as necessary, to ensure continued environmental protection at the site.

2.0 DISCHARGE CONTROL DESIGN REQUIREMENTS

The following sections discuss the design requirements for discharging produced water and storm water runoff.

2.1 PRODUCED WATER

Produced water results from the decontamination of sampling equipment, well development, and pump tests. The drilling subcontractor is required to empty the decontamination pad area daily during decontamination activities so that potentially contaminated water is not left at the pad overnight. Produced

water will be temporarily stored in polypropylene drums and will later be transported for disposal. The water will be disposed of in accordance with local, state, and federal regulations; the field manager (FM) must approve the disposal method.

If the FS includes an on-site pilot treatability study, produced water may result from the decontamination of construction equipment. Produced water may also result from water accumulating in topographic depressions containing contaminated material. Produced water will be temporarily stored in a manner approved by the construction manager (CM). The water will be disposed of in accordance with local, state, and federal regulations; the CM must approve the disposal method.

2.2 STORM WATER AND EROSION CONTROL

If the FS includes an on-site pilot treatability study, several elements will be incorporated into the design to minimize unplanned discharges from the site through storm water and wind erosion. Bulk reagents will not be unloaded during rainfall or periods when wind may carry reagents off site. Reagent stockpiles will be covered continually, and treated waste stockpiles will be covered if rainfall occurs. Erosion controls (such as storm water diversion ditches, dikes, and silt fences) will be installed as necessary to minimize erosion by storm water runoff. The construction subcontractor will install temporary and permanent erosion control features to prevent erosion from (1) adversely affecting construction operations, (2) damaging adjacent property, or (3) causing off-site migration of sediment. These measure will include but will not be limited to silt fences, check dams, diversion channels, earth berms, and temporary grass. Measures to control temporary erosion will be in place before beginning excavating or grading operations. The site will be graded continually and maintained so that storm water runoff is diverted around open excavations and is intercepted by silt fences before it leaves the site. The features for temporary erosion and sediment control will be left in place until the area is stabilized with permanent grass.

3.0 AIR EMISSIONS CONTROL

If the FS includes an on-site pilot treatability study, the construction subcontractor will be required to control dust. The construction subcontractor will spread water as needed to control dust migration from the work area. The construction subcontractor will be required to cover treatment reagents during delivery to the project site and to provide for protected storage of the reagents to minimize dust emissions.

4.0 CHEMICAL RELEASES

When an unplanned chemical or hazardous material release occurs, the site safety officer will immediately identify the character, source, amount, and extent of the incident. If the release involves chemicals, material safety data sheets (MSDS) will be used to define the degree of hazard associated with the incident. MSDSs and shipping manifests will be maintained in the site environmental engineer's (SEE) office.

The site safety officer or designee will be able to assist officials in assessing the incident and implementing any necessary evacuation. Information provided by the FM will include but will not be limited to the following:

- Name and phone number of person reporting the incident
- Name and address of the facility
- Time and type of incident (for example, release or fire)
- Names and quantities of materials involved, to the extent known
- Extent of any injuries, if known
- The potential hazard to health and the environment off site

A reportable release, fire, or explosion that affects off-site areas or has the potential to affect an off-site area will be reported to the appropriate administrative agencies. The reporting centers include the National Response Center (1-800-424-8802) and the Louisiana Department of Environmental Quality hotline at (504) 342-1234.

5.0 EQUIPMENT AND DEBRIS CONTAMINATION

A decontamination pad with curbs to contain decontamination water will be used. The drilling subcontractor is required to decontaminate sampling equipment on the decontamination pad. Contaminated debris and equipment will be cleaned with high-pressure steam or water before being removed off site. Decontamination water will be transported off site to an industrial wastewater treatment facility and will be treated in accordance with the National Pollution Discharge Elimination System and all local, state, and federal regulations.

6.0 WASTE TREATMENT QUALITY ASSURANCE AND QUALITY CONTROL

If the FS includes an on-site pilot treatability study, the FM and the construction subcontractor will implement a detailed quality assurance and quality control (QA/QC) program. The QA/QC program includes elements such as (1) remedial action goal verification sampling of untreated waste, (2) waste disposal sampling after treatment, (3) communicating with the construction subcontractor about treatment areas and reagent requirements, and (4) reagent quality testing. Details regarding waste treatment QA/QC are included in the project quality plan and the sampling and analysis plan.

7.0 TREATED WASTE DISPOSAL

If the FS includes an on-site pilot treatability study, the resulting treated waste must be transported in accordance with all local, state, and federal transportation regulations. Treated waste must be disposed of in a Subtitle D landfill specifically approved by the State of Louisiana to accept treated waste from the DM site. The approved landfill must be equipped with an impermeable liner and a leachate collection system.

8.0 EMERGENCY PROCEDURES

The following telephone numbers are provided for emergency response activities:

- Emergency - fire, ambulance or police: 911
- Non-emergency fire department - Ponchatoula Fire Department: (504) 386-6460
- Non-emergency police - Ponchatoula Police Department: (504) 386-6548
- Ambulance - Ponchatoula Fire Department: (504) 386-6460
- Poison Control Center - 911 or Ponchatoula Fire Department: (504)386-6460
- Hospital - North Oaks Medical Center: (504) 345-2700
- Emergency room: (504) 230-1370

In case of an emergency that may cause harm to the environment, the FM will implement the site emergency procedures outlined in the Health and Safety Plan (Tetra Tech 1998). As discussed in the Health and Safety Plan, the FM is specifically responsible for the following:

- Implementing the site contingency plan, including ordering site evacuations, directing fire fighting efforts, and spill control and cleanup
- Contacting and coordinating with local emergency services such as the fire department; ambulance services; and federal, state, or local emergency or environmental agencies. In the event of an airborne release of toxic material, local authorities must be informed immediately to assess the need to evacuate the public in the vicinity of the site.
- Determining the cause of the incident and its prevention in the future
- Filing necessary reports with federal, state, and local authorities and completing a written report for the project manager (PM)

In the event of an emergency, the project health and safety officer and site health and safety officer will work closely with the FM and will provide advice and support as necessary. The site health and safety officer will be responsible for the following:

- Evaluating emergency conditions and making recommendations regarding (1) risks to off-site personnel and the public, (2) the need to upgrade personal protective equipment to protect on-site personnel and emergency responders, and (3) evacuation of on-site personnel.
- Supervising evacuation and decontamination procedures
- Providing first-aid services and medical support or evacuation for injured or exposed personnel
- Contacting the project health and safety officer and PM as soon as possible regarding any accident or injury other than minor first-aid cases
- Preparing a written incident report for submission to the FM and the project health and safety officer within 24 hours of the incident; the report will include those items identified in the Health and Safety Plan (Tetra Tech 1998).

If the FM is absent or incapacitated, the site health and safety officer or SEE will assume the responsibility of the FM. If both individuals are unavailable, the construction subcontractor's health and safety representative shall assume these responsibilities.

On-site employees are responsible for (1) immediately reporting emergency situations or conditions to their supervisors, (2) alerting other employees, (3) helping injured personnel, and (4) assisting as directed in the mitigation of the incident.

In the event of an emergency that might affect off-site areas, the FM and construction subcontractor will not order or conduct evacuations of the general public. The FM will make recommendations and assist when possible, but the decision to call an evacuation will be the responsibility of the local agency in charge. In the event of a fire or explosion, the local fire department shall be summoned immediately. Upon their arrival, the site health and safety officer or designated alternate will advise the fire commander of the location, nature, and identification of any hazardous materials on site.

Spills of hazardous materials shall be corrected and controlled as soon as possible. Primary attention shall be given to the protection of life (on and off site) and the prevention or mitigation of spills. If spills are larger than the reportable quantities identified in the Health and Safety Plan, or if off-site air emissions present a potential release that exceeds limits established in the Health and Safety Plan (Tetra Tech 1998); appropriate community notification shall be performed.

9.0 REFERENCES

Tetra Tech EM Inc. 1998. Health and Safety Plan. Delatte Metals, Inc. Ponchatoula, Louisiana. November.

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TRANSPORTATION AND DISPOSAL PLAN FOR INVESTIGATION-DERIVED WASTE FOR REMEDIAL INVESTIGATION AND FEASIBILITY STUDY DELATTE METALS, PONCHATOULA, LOUISIANA

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1.0 INTRODUCTION

Tetra Tech EM (Tetra Tech) received Work Assignment No. 025 RICO-06DF from the U.S. Environmental Protection Agency (EPA) under Response Action Contract (RAC) No. 68-W6-0037. Under this work assignment, Tetra Tech is directed to conduct a Remedial Investigation/Feasibility Study (RI/FS) at Delatte Metals, Inc. (DM), which requires the development of this transportation and disposal plan (TDP) for investigation-derived waste (IDW). This TDP is based on (1) the EPA Statement of Work (SOW) dated September 17, 1998, and (2) discussions with the EPA work assignment manager during an initial scoping meeting held on September 29, 1998.

Delatte Metals is located in Ponchatoula, in southern Tangipahoa Parish, Louisiana. The site is bordered by a residence and a wooded area to the west, a wetland and woods to the east, and residences to the north and south. From 1970 until 1993, the site was used as a lead battery recycling and smelting facility.

The purpose of this plan is to provide guidance for the transportation and disposal of IDW generated during the RI/FS at the DM site. As discussed in the Pollution Control and Mitigation Plan (Tetra Tech 1998a), activities conducted during the RI/FS are expected to generate various amounts of soil, wastewater, and personal protective equipment (PPE). The transportation and off-site disposal of IDW are addressed in the following sections of this plan: Section 2.0 summarizes the handling and management of on-site IDW, Section 3.0 summarizes the mobilization and demobilization, Section 4.0 summarizes the disposal of the IDW, Section 5.0 discusses deliverables, Section 6.0 discusses health and safety, and Section 7.0 discusses scheduling. References are provided in Section 8.0.

2.0 SCOPE OF WORK

Following sampling, all soil cuttings will be containerized in 55-gallon drums pending off-site disposal. All plastic sheeting used during field activities will be collected and disposed of with the soil cuttings. Decontamination activities, including high pressure water treatment of equipment, will be restricted to a decontamination pad in the contamination reduction zone. All decontamination fluids will be containerized and stored as appropriate in the designated on-site storage area. Sediments that accumulate in the decontamination pad will be added to containerized soils. After they are cleaned, all disposable

protective clothing and equipment - including Tyvek suits, booties, and gloves - will be collected, double-bagged, and disposed of in accordance with current EPA guidance on IDW (U.S. EPA 1991).

Tetra Tech will subcontract with a private service or contractor to manage and dispose of IDW. The subcontractor will provide qualified personnel and all equipment necessary to dispose of IDW. The contractor will also be prepared to present the required documentation indicating that all required licenses and permits, both state and municipal, are current and valid to provide disposal services for hazardous and nonhazardous wastes. Services to be provided by the subcontractor, at a minimum, include the following:

- Provide for disposal of soil cuttings and sediment from sampling
- Provide wastewater treatment for groundwater
- Provide for disposal of drums containing decontamination fluids
- Transport wastes to a proper off-site disposal area
- Maintain equipment to ensure that scheduling goals are met

In addition, the subcontractor will provide qualified personnel, and all equipment and supplies needed to perform the IDW disposal activities outlined below.

3.0 MOBILIZATION AND DEMOBILIZATION

Mobilization and demobilization activities include the following:

- Mobilize equipment to the site. Equipment that is in poor condition will be repaired or replaced before work begins.
- Following completion of all field activities, provide for the disposal of the decontamination pad constructed at the IDW storage area.
- Attend a Tetra Tech project initiation meeting. During the meeting, the Tetra Tech project manager and field operations manager will discuss project objectives, the disposal schedule, and health and safety issues. This meeting will be attended by all subcontractor personnel who will work at the site.
- Transport IDW from the designated on-site IDW storage area to an off-site disposal area. The subcontractor will be responsible for any equipment needed for disposal operations.

4.0 INVESTIGATION-DERIVED WASTE DISPOSAL

Soil and sediment IDW will be analyzed to determine the most appropriate, cost-effective disposal option. Nonhazardous soil will be sent to an appropriate landfill for disposal. Any soil cuttings or sediment deemed to be hazardous according to the Resource Conservation and Recovery Act will be sent to an appropriate hazardous waste landfill.

All produced water resulting from equipment decontamination, well development, or pump tests will be drummed in polypropylene drums. When a drum is full, the contents will be sampled and analyzed to determine treatment and disposal options.

The subcontractor will provide for the disposal of (1) soil and (2) decontamination and well development fluids (produced water). After the completion of each day's field activities, the subcontractor will perform the following:

- Provide for the transportation and appropriate disposal of drums of decontamination fluids present in the designated on-site IDW storage area.
- Provide for the transportation and appropriate disposal of drums of soil IDW. The subcontractor must dispose of the drums at an approved off-site disposal facility.

Both hazardous and nonhazardous IDW are expected to be generated during the project. A table of estimated IDW volumes will be completed after the field sampling plan for the RI/FS is approved.

Upon completion of the RI/FS activities, the decontamination pad will be dismantled. All plastic will be drummed and disposed of with the soil IDW. The surrounding area will be regraded and returned to its original condition.

5.0 DELIVERABLES

The subcontractor will provide, at a minimum, the following information regarding IDW disposal:

- Copies of site documentation such as logs, site activities, and others

- Copies of all hazardous waste manifests, records, facility name, EPA identification numbers, facility location, and telephone number of a responsible contact at disposal facility

6.0 HEALTH AND SAFETY

During all field activities, the subcontractor will follow all Occupational Safety and Health Administration requirements for general industry, hazardous waste site operations, and construction. The subcontractor personnel must comply with all other regulatory and environmental health and safety requirements, including but not limited to fire protection, ionizing radiation protection, hazardous and nonhazardous waste disposal, and traffic safety.

The subcontractor will be required to perform all field work in conformance with the site-specific health and safety plan (HSP). The subcontractor may develop a HSP that complies with all of the previously mentioned requirements, or it may adopt Tetra Tech's HSP (Tetra Tech 1998b). All subcontractor personnel participating in field activities will be required to read the site-specific HSP acceptance form before work begins at the site. Subcontractor personnel engaged in field work involving hazardous materials must meet the training and medical surveillance requirements of Title 29 of the Code of Federal Regulations (CFR), Part 1910.120 (e) "Training", and Title 29 CFR Part 1910.120(f), "Medical Surveillance."

Tetra Tech anticipates that most subcontractor field activities will be performed in Level D PPE. Nevertheless, upgrading from Level D to Level C may be necessary. Consequently, the subcontractor will have adequately trained personnel and appropriate PPE available on site to work in Level C if necessary.

7.0 SCHEDULE

Field activities will be performed in phases according to the field sampling plan. For subsequent sampling activities and phases, Tetra Tech will provide a schedule to the subcontractors.

8.0 REFERENCES

Tetra Tech EM Inc. 1998a. Pollution Control and Mitigation Plan. Delatte Metals, Inc.

Tetra Tech EM Inc. 1998b. Health and Safety Plan. Delatte Metals, Inc.

U.S. Environmental Protection Agency (EPA). 1991. "Management of Investigation-Derived Wastes During Site Inspections." Office of Emergency and Remedial Response. Washington, D.C. EPA/540/G-91/009.

U.S. EPA. 1992. "Guide to Management of Investigation-Derived Wastes, Fact Sheet", 9345.3-03FS.