ecology and environment, inc.

International Specialists in the Environment

ZT2461

Job Number ZT1061 ETX1368FAA
T06-9206-14

Lithium of Lubbock
Funded Removal

Project Log #1

995062

Hotel: Barcelona Court
5215 Loop 289 South, Lubbock, TX 79724
(806) 794-5353

FAX (806) 798-3630

Rusty Vernon 806 747-2929
(WTW owner)

ERCS mobile phone

no one
(713) 248 0797

Call for dial tone first
789-7626

Hank Beaper 806-796-9964

City of Lubbock P.O. Box 2000 East 35th St. and Guava Ave
Lubbock, Tx 79457

Henry Day - Supervisor (24hrs) 806-767-2587
Kim Hann - Industrial Chemist Water utilities 806-767-2626
mobil phone (489-1141)
FAX 806-762-3623 city hall
806 767-3232 close by

Martha Boggs - Industrial Program Coord.
Water utilities

Texas Water Commission District 2 5303 50th, Suite 306-4
Lubbock, TX 79414-1875

Jeff Berry - Ass. Dist. Mgr. Field operations 806/796-7092
FAX 806/796-7107
William King - Field Investigator
Malcolm Laing - Field investigator

TAT mobil phone at site (214) 906-5691

Oil Source
Jim Yeager Facilities Manager Transformer Division
Brandon + Clark, Inc. 3623 Interstate 27 Lubbock, Tx 79404
(806) 747-3861 1-800-289-2224
Residence 806 793-1585

Product Shell Diala(R) Oil Ax

Texas Air control Board 806-744-0090
5302 SAVIO Dr 79412 744-6055

Joe Lafanaro EPAERB 908-321-6747 / 908-321-6740

E & E Job Number ZT061

Telephone Code Number (214)220-0318

Site Name Lithium of Lubbock

City/State Lubbock, Texas

TDD T06-9206-14 or T06-9210-011

PAN ETX1368FAA or ETX1368FBA

SSID 3X

Start / Finish Date 6/17/92 / 6/23/92

Book 1 of 4

E & E Emergency Response Center: (716) 684-8940
E & E Corporate Center: (716) 684-8060
MEDTOX Hotline: (501) 370-8263
E & E Safety Director (Home): (716) 655-1260

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T06-9206-14 Lithium of Lubbock Wed 6-17-92

1530 TAT Mo Erfani (pm) and Carol Geraghty (SSO) were informed of an emergency site assessment in Lubbock, TX that may go to an immediate removal. TWC (806-796-7092) informed OSC Greg Fife that lithium batteries stored on pallets (142 pallets / 160 ~~tons~~) were burning. The Warehouse in which they were stored is bankrupt and the initial fire started on 6/8/92. Firemen used water to try + put it out & moved the batteries outside where they spontaneously reignited. Mercury batteries may also be present. TWC requested assessment. OSC requested TAT mobilize with him on 6-18-92, 7Am Southwest flight to Lubbock to meet with the TWC. Crews will be staying at the Holiday Inn ~~6SS 22~~ 6/12 Cay. Site is located at 23rd + C streets in Lubbock. TATS Geraghty + Erfani prepared SSP & arranged supplies and equipment in preparation for mobilization tomorrow.

Carol A Geraghty

T06-9206-14 Lithium of Lubbock Thurs 6-18-92

0530 TATS Mo Erfani (pm) and Carol Geraghty (SSO) departed their homes in route to gather additional supplies and meet OSC Greg Fife at the Dallas Love field airport (Erfani @ 0415)

0630 TATS Erfani + Geraghty met OSC Fife at airport and discussed planned site activites. Proposed work - meet with TWC to gather additional information on site background + status. Conduct site assessment and if warranted, an Emergency Removal action will be initiated. Carl

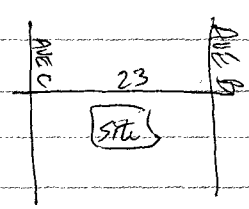
SSM - TAT members Erfani and Geraghty arrived

0830 Lubbock air port at this time; both TAT members conducting a brief site safety meeting to discuss the work Tasks and level of protection. TAT members and OSC will visit Texas Water Commission and will conduct a level "D" (off site) visual observation of the site to determine nature of the problem. Topics that were discussed were physical and chemical hazards; do not get near chemical; avoid any unsafe act; watch for trip, fall hazards and heat stress. Weather is sunny about 80°F and high expected around 90°F, slight variable wind.

SSO Carol Geraghty Carol A Geraghty
pm Mo Erfani

0845 TAT members and OSC to the site to meet Texas Water Commission at this time. ME

0910 TAT + OSC arrived at the warehouse site OSC informed TWC to meet at the site at 0910 today.



0912 TWC reps Malcom Laing and William King met OSC Fife + TATS.

- 7 Trailer loads left (23 orig) 23rd Match last load going to Pecos. 134K lbs zinc carbon 96K lithium batteries, 90K lbs misc batteries. Ones outside caught fire moved outside - 7 days later spewed, burned upon moving.
- Will give off Hydrogen sulfide / old USCG orig

Carol A Geraghty

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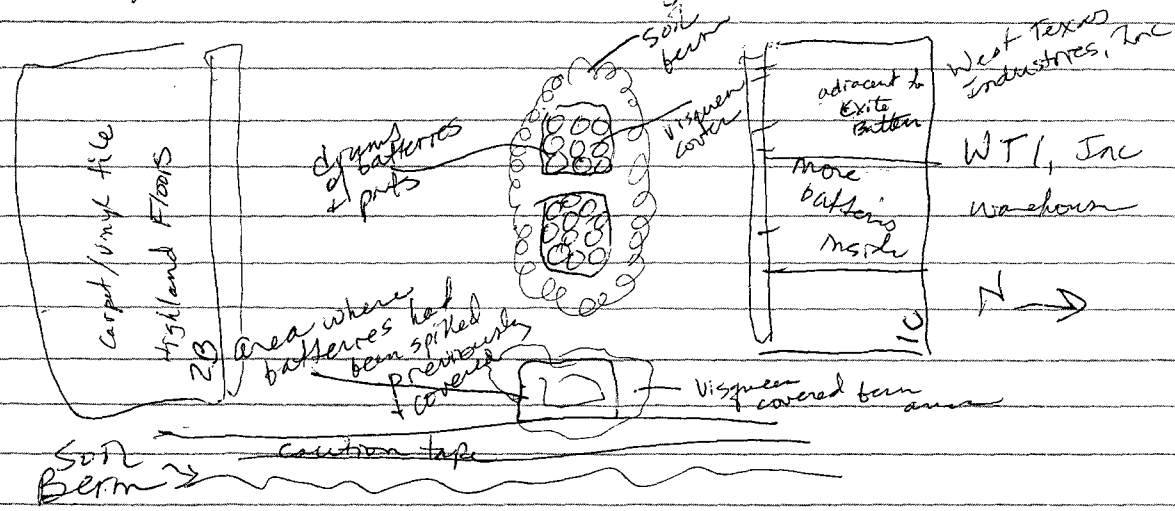
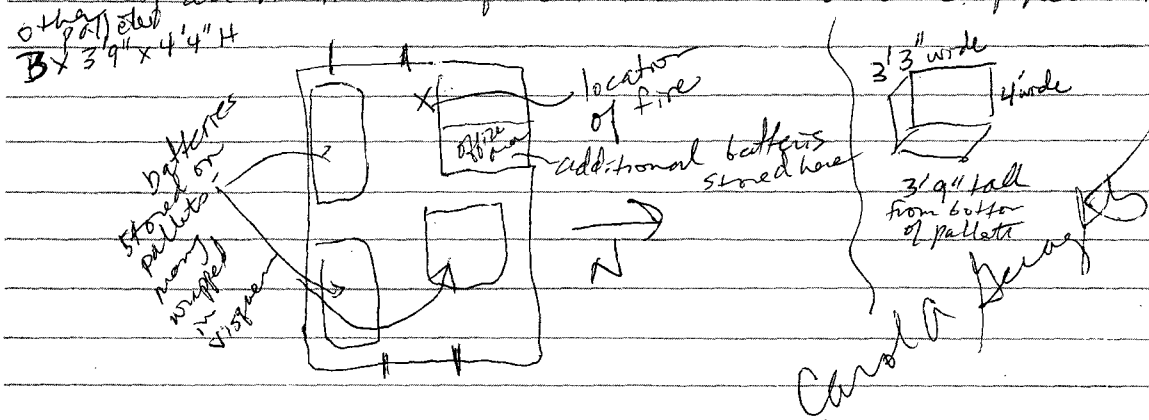
T06-9206-14 Lithium of Lubbock Thurs 6-18-92

owner. Drums of misc parts sizes range from cigarette pkgs to ~1 ft long



Lax transport - transporter (destin for Pisalt)
West Texas industries - warehouse owner
Batteries have been here since April of last year
7-8" rain in last 4 weeks. moisture building up underneath visqueen. Water stored in black drum + soil under were both tested by TWC and undedectable quantities of contaminants were observed
— At perimeter Radiation was checked Monitor 4
EPA 696789, no calibration, background = .02 mR/hr
0920 TAT OSC + TWC entered warehouse area and (Radiation 0.02 mR/hr
observed batteries stored inside. TWC has copies of all manifests of batteries believed to be present



TOC-9206-14 Lithium of Lubbock (See pg 22 →)
TOC-9210-011
Nikon 4004s 35mm Camera EPA # 724884 Serial 2530137 Thurs 6-18-92
50mm Lens - 24 exposure print film

Roll #	photo #	time	Dir	Subj	Photographer = Geraghty/Erfan
1	1	0939	N	inside warehouse location of first fire	
1	2	0940	S	Haz waste sticker on pallet (1)	See pg 6
1	3	0941	W	Haz waste sticker on pallet (2)	
1	4	0945	N	Lithium battery that had caught on fire	
1	5	0946	E	inside office area - batteries stored inside	
1	6	0947	N	boxy batteries orig from USC6	
1	7	0953	W	one pallet with batteries strewn about	
1 (6/19/92)					Photographer = Geraghty / Erfan
1	8	0811	S	Entrance to back of warehouse (marked with caution tape) taken from 23rd street	
1	9	0814	E	Entrance to back of warehouse taken from avenue C	
1	10,11,12	0816	SE-S-SW	Three shot panaramic view of the front of the warehouse, outdoor staged drums + areas bermed by the City + Fire department in response to the battery fire (taken from N)	
1	13	0821	W	Photo of bermed area next to street taken from east of warehouse on 23rd street.	
1	14	0824	W	Close up photo of bermed + visqueened area where some of battery waste was spilled by Fireman (?)	
1	15	0825	S	bermed area outside where the drums + boxes of lithium batteries that were burning had been moved	
1	16	0826	down	photo of burned battery part lying outdoors.	
1	17	—	V0, D	photo accidently taken near drum —	
1	18,19,20	0827	SW-W-NW	panaramic view of the battery pallets staged outdoors taken from the east.	
1	21	0830	W	Front entrance of warehouse where the batteries were stored.	
1	22,23,24, 25,26,27	0836	SW W NW	view of interior of warehouse taken from front entrance door - 6 photo panaramic	

Carola Geraghty

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T06-9206-14 Lithium of Lubbock Thurs 6-18-92

0935 OSC requested TAT record any generator information readily observed on pallets.

— one pallet contained "Solid Power Primary Battery"

(1) Haz Waste Sticker —

Accumulation date 8/19/90

D.O.T. Proper Shipping Name: Battery, Electric Storage, Dry, (Contains potassium Hydroxide) Corrosive, Dry Lead (GEL) NA1813 D002, D009

Generator: Environmental Pacific Corp.

111 West 4th Street, Amity, Oregon 97101

ORD980977334

(2) Haz Waste Sticker — Generator not listed.

— All Haz waste stickers that had a generator name were from Environmental Pacific Corp.

Transfer company info found on one set of pallets —

Delivery recent Lack Transfer Co. (806) 376-8657

Box 1088, Amarillo, Tx 79105, Lubbock, Tx (806) 744-5783 2/28/91 Trailer # SOUZ 650218

Consignee Basalt 2902 Balmorhea Hwy, Pecos, Tx (915) 447-3272 wt 44000 FB No. 29128-9,

Shipper Intercon forwarder pronto pig.

~~Name on box — Plaskolite, Inc. P.O. Box 1497, Columbus, Ohio 43216 RAM: PL-150 CA Resin (1500# CTN) LACRISOA (acrylic resins) Cos 6/18/92~~

this was only a box used to put batteries in — not generation

TWC location

— West of 50th and Slide Street.

From site — continue on 23rd East right on Ave A right cross Slide road 3rd bldg on left (Texaco, strip comercial bldgs, office bldgs.) near Savana Oaks Apt complex

Carol A Geraghty

T06-9210-011 FY92-3045 TXD9880727757

T06-9206-14 Lithium of Lubbock Thurs 6-18-92

Initially there was a leak in the roof that caused the first fire - later the sprinklers came on + caused additional fires. Cay

1000 OSC + TATS depart the site in route to TWC (see pg 6 for Directions) OSC plans to review manifests + records and prepare to mobilize the ERCS contractor

1020 OSC + TAT arrived at TWC (5303 Southwest Prof. Center)

OSC requested TAT review TWC files and try to locate generators names and trace back history of how batteries arrived at the warehouse. OSC will be discussing options w/ EPA management.

TWC provided to TAT copies of the manifests of waste beleived to be currently on site (from previous transporter)

TAT talked to TWC Jeff Bertly the manager in charge

TWC Inventory of batteries on-site inside warehouse

40 pallets cardboard box of lithium batteries

15 pallets of drummed batteries - Lithium (4 drums/pallet)

53 pallets cardboard box labeled battery, Electric Storage, Dry

no manifest for this one 1 pallet magnesium waste battery cardboard boxes

1 pallet Strobe alert (Small boxes on pallet) look like yellow reflectors w/ instruments lithium batteries?

1 pallet motorolla mercury batteries busted open

7 pallets D009 metalic metal batteries

— Altus Corporation 1610 Craine Court San Jose Calif. 95112 - listed as generator on haz waste sticker

3/11/89 cum. date manifest doc# 88669214

EPA ID# CAD082910530.

Same drum had 2 haz waste stickers. The other was from Env. Pacific Corp.

1 pallet cardboard box "non regulated" sticker

1 pallet household batteries "non reg." open sticker

6 pallets - no sticker or label lead/acid type suspected

2 pallets - "Ice bouys" Zn Carbon type batteries

1 pallet - cardboard split - small envelopes no Id still in Shrinkwrap

1 pallet - polaroid batteries, bitton sediment from Zn Carbon battery

112 individual drums - trace sludge or filters

Carol Deraghets

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T06-9206-14 Lithium of Lubbock Thurs 6-18-92

Consultant for Bsalt Industries - orig 23 truck loads shipped from Env. Pac. Corp. from Oregon during April of 91 - lease on warehouse April 4th. Bsalt could not handle all at one time so it was stored temp. in warehouse. 7 truck loads are left from orig 23. They estimate 134,847 lbs of Zn Carbon batteries, 96,274 lbs of Lithium batteries, 89,898 lbs of misc batteries comprise the remaining 7 truck loads at the warehouse. Last shipment was: Mr. Lack 3/23/92 (shipper out of Amarillo) Lack Transfer (D.L Lack - TWC contact).

Since March - June 8th first fire - TWC notified. June 15th noticed smoke from warehouse. Fire dept responded 2nd time - no visible flame 2nd time 1st fire - kicked in sprinkler system. City of Lubbock and Fire dept. did staging and berming of drums that were on fire. Env. Pac. Corp. Mr Richard Hill - owner of both that comp. + Intercon Transport. TWC has left messages with Attorneys + Resource Holding Limited (503-~~636-3909~~ 226-7331) another company he was associated with. neither called back 6/18/92 Attorney - Jeffery Bowersocks (503-452-5858). TWC Had called both offices Monday no response

Terry Black - Pronto Pig - contracted for transport - called monday (503-~~684-8026~~ 648-7444) he said they were suing Richard Hill for failure for payment (will file TUE). Env. Pac. Corp + Intercon had disconnected lines. Rusty Vernon - manager of West Texas warehouse (806 747-2929). Mr. DL Lack - transported from rail cars to warehouse (806 376-8657).

Bill Metters - owner of Bsalt - Recovery + Reclamation is their new name - he said Mr Hill sent him equipment for partial payment ($150K credit) balance owed is $200K. He wants money in hand before he does anything with the batteries. Carlos Flors (Lack Transfer) - they have freight money $7K for transport

Carol A Geraghty

T06-9210-011 Lithium of Lubbock TXD988072757 9

FY92-3045

T06-9206-14 (716-634-6794) contact: Tom Dobmeier 716-959-2868 Thurs 6-18-92

Basalt and BDT in New York are the only 2 facilities the TWC is aware of that can take lithium batteries. 2 recyclers suggested to immerse in caustic soln such as potassium or sodium hydroxide to help stabilize. Mr. Matters has the solution available for packing but no way to ship. Could spray drums with oil to keep moisture out. Any wet acid batteries were drained and possibly filled with caustic - not verified may need to recheck. Lithium batteries contain acidic materials. No specific conc. of NaOH was suggested Mr. Matters charges for accepting are: 30¢ lbs on Zn, 30¢ lb on misc, $2.50 lb for lithium batteries.

- TWC says there is a lot of conflicting information between people he has contacted especially on totals.

Manifests were obtained from the pallets themselves and District 10 office got remaining from Basalt. 91038, 6, 5, 4 + 3 were obtained from pallets. 91037, 9 are known missing. Haz waste stickers on-site 91037, 5, 3, 2, 4, 8, 9, 6. When they shipped waste from warehouse, transporters just picked up random pallets - not all listed with a single manifest #. So manifests contain total but part may already be gone. Consultant estimated 160 tons of material in warehouse. TWC read definitely 45K lbs of material when weights were listed.

<u>TWC Inventory of batteries located outside</u> (in addition to list on pg 7)

4 pallets marked lithium batteries cardboard

4 pallets not marked (probably lithium)

12 drums (open top) w/ mdn. batteries Probably lithium

(on 16th moved 7 additional pallets of lit. batteries outside but this is included on the pg 7 list)

Consultant for Mr Metter - worked up part B applic for permit Eco-logical Environmental Services Inc Terry James (915) 570-0100 - has dealt with lithium batteries before + understands properties located in Odessa, TX

Carol A Geraghty

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T06-9206-14 Lithum of Lubbock Thurs 6-18-92

TWC collected samples on June 10 of the fire water (Mon 8th). City got Bernstein Oil Field Service (local) that has hazmat team to pick up fire water by vacum truck & put in Frac tank. TWC tested soil on which water flowed and water in frac tank for TCLP metals. All were below detection limits. Mr. Metter also got log from Mr Hill desorbing generator summary.

- Fire department wanted to try & return pallets of drums to the warehouse but the smallest movement caused them to smoke again (June 10th). Some of the drums that contain batteries are in an advanced state of rust and are nearly deteriorated in place.

Chv. Pac. Corp. had some enforcement action against them from Region 10 EPA & that is why Mr. Hill shipped all at once. (probably through RCRA)

Interior subcont. w/ Pronto Pig Burlington Northern brought down on rail. Lock from rail car to warehouse. BSalt transported from warehouse to their facility. Bsalt was paid for the first loads - the $350 is for the remaining 7 & partial payment in trucks/equipment.

Channel 28 has been following story. People from Exide battery expressed concerns. Lubbock Fire dept haz mat team has H_2S air monitoring. 48th and Quirt is where Hazmat team is located.

1235 OSC + TAT depart from TWC in route for lunch.

1245-1325 OSC + TAT break for lunch, then depart in route to hotel.

1400 OSC + TAT arrive at hotel and check in; Barcelona Court 5215 Loop 289 South Lubbock TX 79724 (806-794-5353) Fife - Rm 112, Geraghty - Rm 122 and Elfani Rm 213. OSC + TAT are making arrangements for further site actions and discussing options.

Carol A Geraghty

T06-9210-011 FY92-3045 TXD 988072757 11

T06-9206-14 Lithium of Lubbock Thurs 6-18-92

1445 TAT Mo Erfan called Rusty Vernon of West Texas Warehouse (747-2929) to obtain verbal access. Mr. Vernon was not in so TAT Erfan spoke with Barbara Hefner, who was in charge at the time, and Ms. Hefner said she would give message to Mr. Vernon. She gave verbal access to EPA and said someone would be at the warehouse 0700 tommorrow to let EPA in.

1500 OSC Greg Fife received verbal approval from acting Division Director Jim Stevings to conduct emergency removal action at the ~~Jim Steving~~ Cay 6-18-92 Lithium of Lubbock site

1530. TAT Geraghty contacted ATATL Franklin and requested he send mobil phone, air monitoring supplies and additional PPE for level C. Gave info for TDD.

1730 OSC + TATs complete meeting + preparations for emergency removal actions for today.

Summary - 1 OSC, 2 TATs. OSC + TATs mobilized to the site and met with TWC officials to discuss site status and history. OSC gained verbal approval to initiate an emergency removal action. Three ERCS crewmen will be mobilized to Lubbock tonight to prepare for stabilization and overpacking of batteries. TAT arranged for additional equipment + supplies. Verbal access to the warehouse was granted by manager Barbara Hefner. Plans are to meet at the site tomorrow morning to brief ERCS

Carol A Geraghty

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T06-9206-14 Lithium of Lubbock Fri 6-19-92

0700 OSC Greg Fife, 2 TATS: Carol Geraghty (SSO) + Mo Erfani (pm) and 3 ERCS Crewmen: Hank Harder (RM), Mark Nichols (FC) + Matt Salinger (C) arrived at the Lithium of Lubbock site (on 23rd between C + B Streets). The warehouse manager was not available but verbal access had been granted yesterday and the warehouse doors had been opened. Proposed work - OSC to brief ERCS on site status. Conduct perimeter observation of batteries stored on site. Make arrangements to stabilize + overpack batteries. SSM - Level D perimeter observation, trip/fall hazards do not go near batteries, see SSP for other details.

SSO Carol Geraghty Carol A Geraghty

PM Mo Erfani Mohsen Erfani Weather - 20% chance of afternoon thunderstorms, highs expected in the mid 90s, winds are from the south 10-20 mph.

0745 Rusty Vernon from West Texas Warehouse arrived at the site and offered assistance to the OSC.

0953 Rusty Vernon offsite.

0801 OSC Greg Fife + ERCS Harder + Nichols departed the site in route to hotel to begin coordinating equipment and supplies. TATS Geraghty + Erfani and ERCS Salinger remained on site to complete photodocumentation and site sketch. (See pg 5 for photo log).

0854 TAT determined that the camera shutter was stuck open and Roll 1 was probably overexposed. TAT + ERCS departed the site in route to camera shop and the hotel to meet w/ OSC + other ERCS crew.

0915 Camera Shop does not open until 0930 - TAT in route to print shop.

0920 - Copies of manifests + other pertinent information were made and given to ERCS to assist in their disposal efforts. TAT + ERCS in route to Hotel

Carol A Geraghty

T06-9206-14 Lithium of Lubbock ERI 6-19-92

0930 TATS Geraghty + Erfani + ERCS Salinger arrived at hotel and met with OSC + other ERCS crew. TAT provided contact names & technical information to assist ERCS in waste inventory + disposal options.

1045 TAT in route to camera shop. OSC remained in hotel to make calls. ERCS at hotel arranging for equipment, supplies, security + collecting bid info for disposal.

1100 TAT at Armadillo camera shop - salesman may have fixed camera. TAT to drop off roll of film previously shot at 1 hr photo processor to see if they turned out. TAT to Walmart to pick up slide film + batteries for camera. TAT in route to site.

1155 TAT arrived at site to continue photodocumenting materials at the site and to develop site sketches (See pgs 14,15 + 16 for details). Slide film will be used from now on. pgs 18 → detail materials found at site. CAG

1400 - Kenno Henderson of Bergstein Oilfield Services, Inc (806) 744-6278 stopped by the site with an assistant to inquire about possibility of being contracted to assist with clean-up. CAG

1405 - TATS Geraghty + Erfani depart site in route to pick up film, and check with OSC Fife at hotel. The site mapping + photodoc. is approx ½ complete within the warehouse. (No lunch break will be taken by TAT)

1625 - TATS Geraghty + Erfani arrived back on site. OSC Fife and ERCS crews had arrived on site approx 1520. ERCS is setting up security at the present time. A trailer for a CP will be arriving within the next hour. Crews + drums will be arriving near midnight. CAG

Late entry Martha Boggs + assistant from City of Lubbock (Industrial Program Coord. of water utilities) on site approx 1615 to talk with OSC - departed site 1630 — TATS continuing to photodocument and conduct inventory

Carol A. Geraghty

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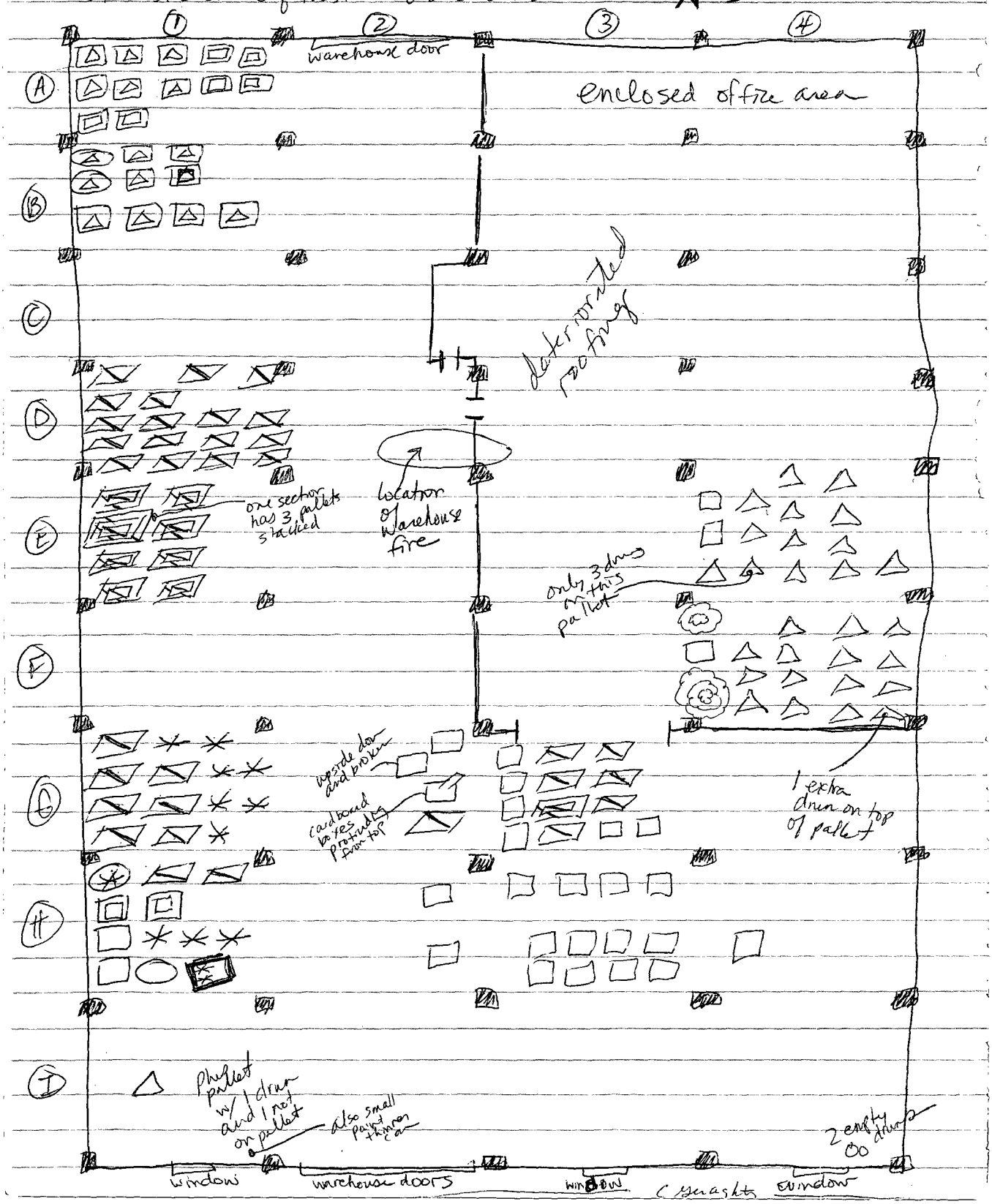
T06-9210-011 FT92-3045 TXD988072757

Site Sketch of inside warehouse



T06-9202-14 Lithium of Lubbock Fri 6-19-92
T06-9210-011 F792-3045 TxD988072757 15

individual pallet #s are referenced bottom first, left to right West to east i.e.

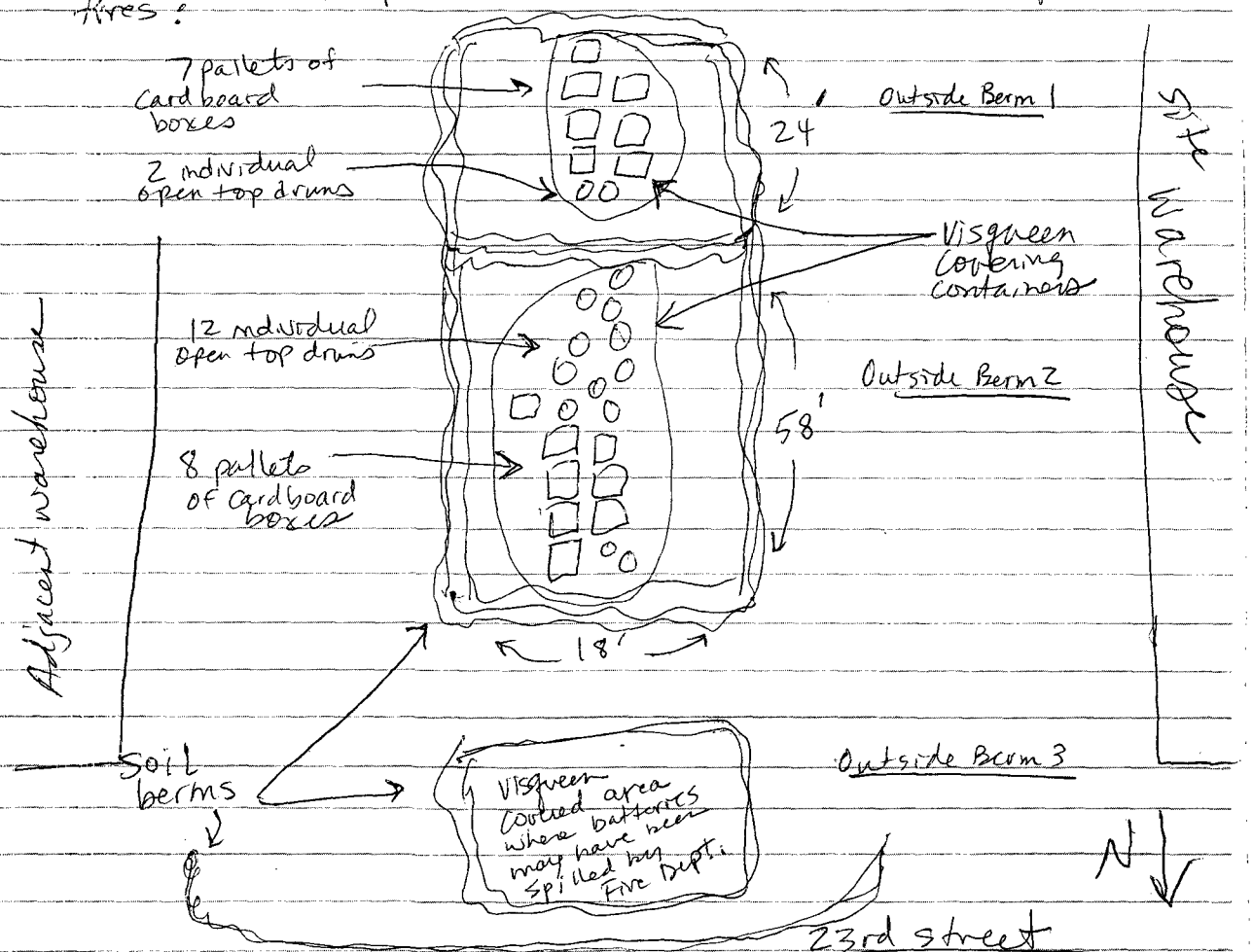
bottom stack 1A	top stack 1A
1 2 3 4 5	3 14 15 16 17
6 7 8 9 10	18 19 20 21 22
11 12	23 24

interior beams are approx 18' apart N-S + E-W. beams adjacent to the E + W walls are approx 12' apart.

Symbols:

- ✳ = wooden crate on pallet
- △ = drums (4) on pallet
- □ = cardboard pallet
- ⬭ = multiple small cardboard boxes wrapped on pallet
- (✳) = wood crates stacked 2 tall
- ▬ = warehouse structural beams
- ▱ = shrink wrapped batteries on pallet
- [△] = cardboard pallet on top of drum pallet
- [□] = cardboard pallets - 2 high
- ▭ = plastic crate (only 1 in 1H)
- ☁ = pallets of ice buoys

Outside staging Area for containers involved in previous fires:



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T06-9206-14 Lithium of Lubbock Fri 6-19-92

Phototracking

Camera: 35mm Nikon 4004s 50mm lens EPA ID 724884 Serial # 2530137

film: Kodak Ektachrome 200 speed ED135-24, 24 Exp.

Roll	photo	time	DIR	Subj	phot/witness
2	1	1230	South	Boxes 5, 10, 17 + 22 in quadrant (1A)	Gernsheit/Erfant
2	2	1232	West	(1A) Close up of hazardous waste sticker Box 10	" "
2	3	1233	SW	(1A) East side of pallets and 1A	
2	4	1235	W	(1A) Close up of Haz. waste sticker of drum 8	
2	5	1237	W	(1A) Center view of section 1A	
2	6	1247	E	(1B) Close up of Box 11 showing contains (strobe ALERT)	
2	7	1248	SE	(Section 1B) west side of section 1B	
2	8	1249	S	North side of quadrangle 1B	
2	9	1250	SW	East side of Quadrangle 1B	
2	10	1251	W	(Section 1B) showing DRUM on pallet 8 haz. waste label information	
2	11	1253	W	west center of quadrangle 1B	
2	12	1301	W	(Section 1D) west view of quad. 1D	
2	13	1302	S	North view of Quadrangle 1D	
2	14	1303	SW	~~West~~ East view of quadrangle 1D	
2	15	1304	→ void		
2	16	1305	E	Close up haz waste sticker on pallet 5 — section 1D	
2	17	1306	W	Close up of pallet 16 section 1D	
2	18	1307	N	Quadrangle 2D Location of Fire	
2	19	1310	SE	(Section 1E) West side of Quad of 1E	
2	20	1311	S	6/19/92 ~~West~~ North side of Quad 1E	
2	21	1312	SW	east side of Quadrangle 1E	
2	22	1320	SE	west side of Quadrangle 1G	
2	23	1321	S	North side of Quadrangle 1G	
2	24	1322	SW	east/Top Quadrangle 1G	
3	1	1324	E	view of leakage below pallet #7 on quadrangle 1G	
3	2	1335	S	North view of quadrangle 1H	
3	3	1336	SE	Close up of lithium 7, 8, 9 (Quad. 1H)	
3	4	1337	W	close up of multi Box (11) Quad 1H showing small Lithium Thionyl Battery	

Carol A Geraghty

TD6-9206-14 Lithium of Lubbock Fri 6-19-92 17
T06-9210-011 FT92-3045 TXD988072757
Phototracking

Roll	Photo	time	Dir	Subj	Photo Witness
3	5	1338	SW	North east view of Quad 1H	Geraghty & Erfan
3	6	1340	S	Section I North view of Quad. 1I	
3	7	1348	NW	South View of Two pallets in Quad. 2H	
3	8	1355	W	east view Quadrangle 2G	
3	9	1356	W	Close up of Haz. sticker & Batter on pallet section 2G	
3	10	1600	N	Section (3H) South view of pallets 5 through 12 Quadrangle 3H	
3	11	1601	SW	NE view of Quad 3H	
3	12	1602	NW	Close up of card board boxes 3 & 4 in Quadrangle 3H with handwritten Hg Waste on box	
3	13	1603	N	Quad 3H, Box 1 & 2	
3	14	1604	E	Box 1, Quadrangle 4H	
3	15	1605	E	Close of Hz label Box 1, 4H Quad.	
3	16	1625	down	Box #5, Quadrangle "3H" small Hg batteries Eveready No. E165 7.0 V	
3	~~17~~ E			Duracell TR165, Duracel TR136	
3	~~18~~ 17	1630	SE	Close up of Box #7 Quadrangle 3H	
3	18	1632	W	Quad 3G, east view	
3	19	1633	down	Quad 3G, Box #13 Motorola 9.1V Mercury Battery	
3	20	1635	SE	Quad 3G, west view	
3	21	1640	NE	Quad 3G, West View	
3	22	1655	N	photo of Ice Buoy Batteries in Quad 4F (stacked 3 pallets high	
3	23	1656	N	Close up of label of ice buoys Q 4F	
3	24	1656	NE	close up of contents of card board box in Quad 4F	
4	1	1659	NE	2nd group of ice buoys in Quad 4F (stacked 2 high)	
4	2	1700	NE	close up of drums in Q 4F	
4	3	1701	NE	Drums in Q 4F (Tray sludges filters)	
4	4	1702	NE	"	
4	5	1710	N	Close up Haz sticker Quad. 4F	
4	6	1711	N	view South side Quad. 4E	
4	7	1712	N	Close up of HW label Drum # (Pallet 11)	
4	8	1713	E	view of west side Quad. 4E	
4	9	1714		Close up of Cardboard 3, 4EQ	

Carol A Geraghty

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Inventory of Materials in Warehouse

Quadrant 1A = 18 cardboard boxes on pallet —
boxes 9, 10 + 22 had visible Haz waste labels
listing "Lithium Batteries for Disposal ORM-C (D002, D003)"
Box 12 - haz waste "Electric Storage Wet, Filled w/ Alkali
Drum pallet 7 and 8 = haz waste "Lithium Batt. for Disp. ORMC
D002, D003 (corrosive). Other Drum pallets appear the same
and 24 drums (on 6 pallets) other labels are
not accessable.

Quadrant 1B = 9 cardboard boxes on pallets, 2 pallets
of mis. boxes containing reflectors, etc 9 pallets
of drums (4/pallet). All visible drum labels
contained Haz waste stickers for lithium (All pall. but #4)
Cardboard boxes 6 + 16 had waste batery haz waste stickers.
boxes 18, 19, 20 had lithium, others not visible
multiple box 11 was open and contained reflectors.
boxes marked ORMC

Quadrant 1D = 17 pallets of blue shrink wrapped
batteries. Haz waste sticker waste Battery, storage,
Dry, contains KOH Dry bead corrosive material D002.
All appear to be the same. Each pallet contains
192 batteries (Saft solid power primary battery -
pre activated gelled air depolarized or viva energy
cell G12)

Quadrant 1E = 17 pallets of blue shrink wrapped
batteries, identical to quadrant 1D

Quadrant 1G = 7 pallets of blue shrink wrapped batteries
All appear to be the same as Quadrant 1D
7 pallets of wooden crates Haz waste stickers
list "Battery, Electric storage, Dry (contains KOH)
corrosive, dry bead (Gel) NA1813 D002, D003

Quadrant 1H = 2 crates on wooden pallets labeled
the same as wood crates in quad 1G. 5 crates
not on pallets marked lithium batteries

Carol Geraghty

Inventory of Materials in Warehouse - Cont. Fri 6-19-92

[2 pallets of batteries] similar markings as 1D
[6 cardboard boxes] all marked Lithium batteries for disposal ORM-C D002, D003 [1 group of cardboard] boxes marked Lithium - Contains lithium Thionyl chloride batteries (BA-6598/u) - boxes are in bad shape.
[1 plastic crate] - unmarked

Quadrant 1I - [1 pallet of 4 drums] and [1 pallet of 1 drum (with 1 drum on floor)]. Possible empties. No other markings

Quadrant 2H - [2 pallets of cardboard boxes marked] "Lithium batteries for disposal ORMC D002, D003

Quadrant 2G - [1 pallet of batteries marked] "Waste Battery, Elect. Stor. wet filled w/Alkali Corr. Mat. D002 Approx 72 larger sized batteries [1 cardboard box on pallet] with protruding parts from top, [~~1 cardboard box on pallet~~] on side w/ Motorola battery packs on floor, [1 cardboard box w/unknown contents]

Quadrant 3H - [12 cardboard boxes on pallets] pallets 1, 3, 4, 5 & 9 had labels "Waste Batt. Electronic Storage wet filled w/Alkali Corrosive Mat. D002 - also hand written on most was "Haz Batts". Pallets 2, 6 and 10 were inaccessable. The remaining were labeled Lithium Batteries for Disposal ORM-C

Quadrant 4H - [1 cardboard box on pallet] with haz waste label Lithium Bat. for Disp. ORM-C. D002, D003

Quadrant 3G - [6 cardboard boxes on pallets] and [8 shrink wrapped batteries on pallets] All shrink wrap batteries except for pallet # 11 were the same as Quad 2G. Shrink wrap # 11 was the same as in Quad 1D (solid power) Cardboard box 10 + 12 are marked Non regulated waste - household batteries. Box 13 is marked Waste Batteries - etc. and Mercury Battery. Other boxes - no access

Carol a Dougherty

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Quadrant 4F - 5 pallets of Ice buoy batteries, Haz waste label Waste Battery Electric Storage, Wet, Filled w/ Alkali, Corrosive Material D002 Inventory Tag - Ice Buoy - NPS, Finished 2625 lbs 6-24-88 tag #462, Larry - 1st 2 sets - Ice buoy battery Y1995, 12V, 320 Amp same haz waste sticker 1 cardboard box on pallet - unknown small flat batteries. 15 pallets of drums (4/pallet) plus one extra. Accessable haz waste labels indicated Tray sludge or filters corrosive. Haz Waste labels Corrosive solid NOS D002, Corr. Mat UN1759 Accum. Date 8/14/90. * Note: All haz waste stickers that had a generator that were observed in warehouse had Environmental Pacific Corp. as the generator

Quadrant 4E - 13 pallets of drums (4/ea) - one pallet has 3 drums. Haz waste stickers indicate Accum. Date 8-31-89, Corrosive Solid NOS D002, Corrosive Mat. - Gen. Env. Pac. Corp., hand written notes - tray sludge written on many, 2 Cardboard boxes on pallets - 1st marked polaroid batteries (hand written - 2nd not labeled

Outside berm 1 - 7 pallets of cardboard boxes and 2 individual drums. Some cardboard boxes have Lithium Batteries for Disp. ORM-C D002, D003 on panel (Some boxes could not be observed) open top drums - unknown contents

Outside berm 2 - 12 drums (not on pallets) open top unknown contents 8 cardboard boxes on pallets Contents are unknown.

All outside containers are covered with visqueen

Outside berm 3 - no known solid materials - spilled batteries from firenest, covered w black visqueen

Carol A Geraghty

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Lithium of Lubbock T06-9206-14 Fri 6-19-92

1612 ERCS trailer (40 ft tool/office trailer) arrived on site and is being staged on 23rd street east of the site. Trailer will be used to hold supplies and as a command post. CAJ

1800 - TAT completes photodocumentation and inventory of drums. ERCS completing arranging for site activities, Jason, security, will remain on site during evening hours (security 6pm - 8am) CAJ

Entire ERCS, TAT + OSC depart site en route to hotel.

Summary: 1 OSC, 2 TATS, 3 ERCS Equipment mobilized today: 1 40' office/work trailer. ERCS procured site security for evening hours. Site visitors - City of Lubbock Martha Boggs and assistant were on site to meet with OSC. Rusty Vernon, West Texas Warehouse Owner, came to the site to offer assistance to OSC + ERCS. Activities - ERCS made arrangements for security, mobilized in a command post trailer + arranged for additional crews and supplies. ERCS Chemist conducted partial inventory of materials on site. Additional ERCS crewmen will arrive tonight around midnight (3 crewmen are expected) OSC coordinating action and interfacing with local authorities. TAT conducted inventory of materials on-site and photodocumented site status. TAT provided technical information to assist ERCS

LATE ENTRY OSC, ERCS Management + TATS Geraghty and Erfani continued work on inventory, SSP and technical details until 1930

Carol A Geraghty

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Photo tracking Phot. Geraghty
enfaw witness

Roll	photo	time	Dir	Subj
4	10,11,12	1719	W-NW-N	3 photo pan of interior of office area where materials are in Quad 4E+F (3 shot pan
4	13	1729	S	North side of outside Berm #1
4	14	1730	S	NE side of outside Berm #1
4	15	1731	N	south side of outside Berm 1 & 2
4	16	1732	NW	E. side of outside Berm #2
4	17	1733	S	N. side of outside Berm 2 & 1
4	18	1734	N	S. side of outside Berm #3 area
4	19	1735	S	site planing meeting OSC & ERCS
4	20	1736	W	site security Gaurd at front entrance
4	21	1737	S	Riedel emergency Mobile Trailer (40ft)

(Remaining photos in roll 4 were discarded)

Roll #1 was lost due to camera failure so the exact photos will be reproduced on slide film. All information found on pg 5 will be identical except for the photo date and time (refer to pg 5). New date is 6/19/92 (Fri) new times are as follows: #1 = 1745; #2 = 1747; #3 = 1748; #4 = 1749; #5 = 1749; #6 = 1749; #7 = 1749; #8 = 1750; #9 = 1750; #10 #11, #12 = 1750; #13 = 1750; #14 = 1750; #15 = 1751 #16 = 1751; #17 = 1752; 18, 19, 20 = 1755; 21 = 1756; #22, 23, 24 = 1757

Carol A Geraghty

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T06-9206-14 Lithium of Lubbock Sat 6-20-92

0800 OSC Greg Fife, TAT Carol Geraghty (SSO), TAT Mo Erfani (PM), ERCS Hank Harder (RM), ERCS Mark Nichols (F) and ERCS Matt Salinger (C) arrived at the site. The security guard had been stationed at the site overnight and departed at 0800 this morning. Proposed work - ERCS to finalize site specific Health + Safety plan, remove physical hazards from warehouse (i.e. move loose pallets + debris from work areas), Mark identity of materials to reference with inventory list, Complete setting up on-site temp CP, if drums and oil arrives, begin stabilization. TAT will document site actions + conduct air monitoring + photo documentation as needed. Weather - temp in upper 70's highs today expected in the mid 90's winds are from the south 10-20 mph, cloudy skies with chance of rain. SSM - perimeter activities level D and onsite within exclusion zone level C (for air monitoring or photodocumenting). be aware of trip, slip fall hazards, stay clear of any heavy equipment operations, avoid contact with batteries, fire/explosion hazard for lithium batteries. Lithx extinguishers + Fire blanket will be available during ERCS manipulation of batteries. SSO Carol A Geraghty Carol A Geraghty
for Mo Erfani Mohsen Erfani COS

0810 Kim Hann Industrial Chemist with the water utilities (City of Lubbock) 806-767-2626 arrived on-site to observe removal actions and meet with the OSC.

0815 - ERCS are completing SSP, TAT is preparing draft poles and readying air monitoring equipment. COS

0920 Remaining ERCS (~~Roberto, Malcolm and Steve~~) on site at this time; Riedel Crew have a brief safety [Humberto Lopez, Malcome Manifec and Steve Woodraska] COS Erfani

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Sat
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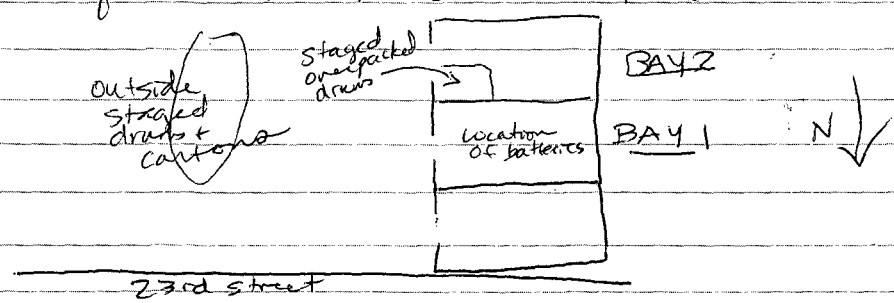
meeting at this time to discuss physical hazards. A complete safety discussion will take place later on to discuss chemical hazards after Riedel Safety plan is completed. ERCS working in clean zone, staging
0945 ERCS are relocating cars Salvage drums at clean ware house adjacent to the hot zone area. ME
from the office trailer cars

LATE ENTRY - During meeting this morning between City of Lubbock official Kim Hann and OSC Greg Fife, K. Hann agreed to provide dumpster, copying and FAX priveledges and to assist in any other way they were able

1000 Truck arrived with 150 85-gal + 55gal overpack drums. ERCS crewmen are unloading drums and staging them within the adjacent warehouse area north of the site. (100 drums of 85gal size + 50 drums of 55gal size - all metal; received from Strick Lease (205/841-0022)) A fork lift was borrowed from Rusty Vernon, owner of the warehouse, and was utilized by the ERCS crewmen to stage the drums into bay 2. ERCS will provide insurance on forklift but no rental costs.



1008 Light rains were experienced at the site. TAT Mo. Erfani continued to meet with Kim Hann of City of Lubbock & conduct site tour.

1050 Rains stopped at the site. No ill effect was observed with the visqueen covered materials staged outside.

1105 - 1145 City of Lubbock Kim Hann off site.

1105 ERCS Malcome Monifee off site in route to pick up ERCS Stanton Nowak and 2 Lith-X fire extinguisher
Carol Geraghty

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Photo tracking

See pg 5 for description of camera - Slide film is being used

Roll	photo	time	Dir	subject	Phot/witness
5	1	1005	W	Over pack drums transported to the site	Erfani/Geraghty
5	2	1005	W	(still located within the truck)	"
5	3	1007	SE	View of the truck which transported the overpack drums	"
5	4	1110	W	ERCS staging drums in bay #2 using a forklift	"
5	5	1111	W	"	"
5	6	1112	W	"	"
5	7	1115	~~S~~ NE North	"	"
5	8	1518	N	Completed staging drums in bay #2 activity	"
5	9	1520	NW	workers placing Mark for exclusion zone	"
5	10	1521	SW	workers placing showering box	"
5	11	1522	S	crew working on site set up activities	"

- The remainder of the roll was discarded so the camera could be used to assist ERCS in obtaining photos of waste for submission to disposal companies

6	1	1749	SW	ERCS testing site emergency shower at decon station	Geraghty/Erfani
6	2	1750	W	ERCS S. Woodraska operating pump + drum filled with water during shower test.	
6	3	1750	W	Finished shower operating pressure	
6	4	1813	W	This picture show General decon. area	Erfani/Geraghty
6	5	1814	SW	workers are loading drums into pickup	"
6	6	1814	SW	to be filled with mineral oil.	"
6	7	1905	down	view of Ansul fire extinguisher	
6	8	1906	W	ERCS unloading mineral oil filled drums from truck	Erfani/Geraghty

Carol A Geraghty

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1145-1230 Kim Hann returned to the site. He is arranging for a dumpster to be delivered to the site for EPA use.

1200 ERCS crewmen ~~Malcome Manifee~~ CAS 6/20/92, Humberto Lopez, Steve Woodraska and Mark Nichols, (in level D PPE) completed staging the overpack drums within bay 2 and the transport truck departed the site.

1230-1330 OSC G. Fife, ERCS H. Harden, M. Salinger, M Nichols, H. Lopez & Steve Woodraska and TATS C Geraghty + M. Erfani offsite for lunch break. — CAG

1330. ERCS Malcome Manifee returned to the site with 2 lith-x fire extinguishers an ERCS FC Stanton Nowak

1340 A comprehensive site safety meeting was held in which all onsite personell were in attendance. (OSC, all 9 ERCS crewmen + 2 TATS). Items discussed included planned actions, location of SSP + Hazcom, Site layout + decon stations, emergency procedures + meeting location, chemical + physical hazards, hospital route, levels of PPE heat stress, etc. [see TAT + ERCS SSPs for details of above procedures]. OSC G. Fife requested all onsite personell hold joint safety + work meeting at the beginning of the day. Vehicles will hold map to hospital + MSDS sheets, notify hospital of our activities. Bathroom in Bay 2 office.

1445 - Safety Plan meeting was completed. ERCS resumed construction of an emergency shower + decon station (level D. H Lopez + M. Nichols). ERCS S. Nowak, M Manifee + S Woodraska are procuring site supplies. H. Harden + M. Salinger continuing site set up preparations. TAT photodocumenting site activities, preparing SSP addendum and documenting site actions. — CAG

1530 TAT assisting ERCS with photodocumenting batteries on site. — CAG

1545 Kim Hann on site - photodocumenting inside warehouse

— Carol A Geraghty

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1630 TAT member Erfani departed with Kim Hann (city of Lubbock) to his (Kim's) office to copy site documentation. TAT member Carol Geraghty also left the site to Wallmart to develop film and buy slide films to be utilized at the site. work in progress at the site around decon. area

1715 TAT Erfani brought back to site by Kim Hann at this time. Kim Hann left the site. TAT member Carol Geraghty came back to site also at this time

1725 Crew preparing decon. station, fixing shower for decontamination and marking exclusion zone. Air tanks for level "B" entry will be located at clean zone by decon. area 85G metal drum is utilized as water storage and water will be pumped for showering as needed. This drum (85G water storage) is located at Northeast portion of Bay #1 (outside) adjacent to shower area and decon station. ME

1800 OSC Greg Fife and ERCS H. Harder completed arrangements for procuring non-flammable mineral oil to be used to stabilize the Lithium batteries. Oil will be obtained from Brandon + Clark, Inc - product = Shell Dial a (R) oil AX. CWJ

1805 ERCS unloading remaining supplies from pick up truck and are preparing to load drums to be filled with mineral oil. CWJ

Late Entry 1745 Security Guard Jason arrived at the site

1810 TAT member Carol Geraghty left the site to pick up processed film at this time. workers are loading drums to be filled with mineral oil. Total of eight drums are loaded. Truck containing eight drums left the site

1815 to collect mineral oil; EPA OSC Mr. Fife, Response Manager Hank Harder and Riedel Chemist Mr. Matt Salinger left the site to observe collection of mineral oil in drums

Mohsen Erfani

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1830 Weather is not looking very good, heavy wind and cloudy sky appears to indicate a thunder storm may be ahead of us. Wind appears very variable and from many different direction. Crew working at clean zone and decon area to place and arrange different needed equipment / Tools and supplys in an organized and ready condition for the later use. Heavy wind is making the atmosphere very dusty. Thunder storm and Tornado watch is in effect. 1843 ME OSC Mr. Fife, Riedel (RM) Hank Harder, Riedel chemist Matt Salinger and Riedel Forman Mark Nichols onsite at this time. TAT member Carol Geraghty is also onsite at this time (1843) ME. ME

1905 ERCS M. Manifee returned to the warehouse with 4 filled drums. Each drum weighs approx 400 lbs, so only 4 can be carried in the truck at one time. Mineral oil filled drums are being staged on the South east of bay 2. CG

— The 2 Ansul Dry Chemical Fire Extinguishers (rated for Class D fires) were selected for use on lithium

1915 Thunder was occuring at the site - potential for rain CG

1920 It is raining at the site at this time. Mark Nichols brought

1930 The remaining four drums of mineral oil onsite at this time.

1945 OSC - Craig Fife, TAT members Mo Erfani and Carol Geraghty, ERCS members Hank Harder, Mark Nichols, Matt Salinger, Humberto Lopez, Malcome Maniffie & Steve Woodraska left the site at this time, Also Stanton Nowak left the site at above time. Security remains onsite. ME

LATE Entry - Larry Smith with TWC arrived at the site approx 1630 and met with the OSC (Fife) to discuss current actions at the site.

Summary - 1 OSC, 2 TAT, 7 ERCS on-site today.

Visitors: Kim Ham of City of Lubbock was onsite during morning to observe work + provide city dumpster

Carol Geraghty

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Larry Smith of TNL onsite to meet OSC + review site activities. equipment - 2 graphite fire extinguishers and 8-55gal drum volumes of mineral oil were the major items procured through ERCS site activities - ERCS completed mobilization of crews, 150 empty drums (150 salvage drums) were transported to the site and staged in Bay 2, the site Safety plan was completed and reviewed with all site personnel, the decontamination station was completed and emergency shower was tested, mineral oil source was located and 8 drums ~~totes~~ (as of 6/20) were filled + brought on-site - all level D. Photos of batteries were taken for submission to disposal companies. Draft poleps were prepared. Proposed work - begin stabilization activities tomorrow once tests are completed.

Carol Geraghty

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T06-9206-14 Lithium of Lubbock Sun 6-21-92

0800 DSC Greg Fife, 2 TATS - Mo Erfani (pm), Carol Geraghty (SSO), and 7 ERCS crewmen: Hank Harder (RM), Mark Nichols (F), Matt Salinger (C, SSO), Stanton Nowak (FC), Malcom Manifee (T), Humberto Lopez (T) & Steve Woodraska (T) arrived at the warehouse site (security guard departs at 0800. Weather - partly cloudy, temp in 70s highs in 80's-90's, winds are 5-10 mph predominant from north and variable. Ground is very wet from rains received at the site last night.
Proposed Work - Address outside materials today: level B w/ ramsuits. Open top 55 gal drums w/ 1/4 vol mineral oil to start. Add batteries. Increase oil as needed. Unwrap lithium batteries before adding to drums SSM - lithium is water reactive, possibly stored in canister. Will do a test on one lithium battery to see how it may react with water and one with mineral oil. - also in level B. Fire extinguisher + fire blanket will be staged next to work area. Demonstrated the use of the fire extinguisher. TAT will conduct perimeter air monitoring outside of exclusion zone (level D) Non lithium batteries will not be immersed in mineral oil. Will vent small outside berm area first before working in area (remove visqueen) SSO Carol Geraghty PM Mohsen Erfani

0830 Morning meeting was completed. ERCS crew are preparing to test lithium battery with water + mineral oil. Decon station has been completed. TAT readying air monitoring equipment. — ay

0840 ERCS reacted a lithium battery with water inside of a soil berm. The interior cell smoked when water was added - cell was out in the open and heat was not accumulated for this test (New cell tested)

0900 ERCS tested a cell in the mineral oil: An old cell broken + wet was placed in oil - it appeared to
Carol a bera shots

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Air monitoring Equipment

①	Am 3000 calibrated 11/25/91	EPA 859118	0-9% LEL Background O_2 = 20.9, ~~H_2S~~ Cay H_2S = 0 ppm
②	Monitor 4 unknown calib	EPA 696789	0.02 mR/hr
③	HCN monitor unknown calib	EPA 6-6615	0 ppm
④	$COCl_2$ monitor unknown calib	EPA 696618	0 ppm

TIME	Location	Inst. #	reading	Other
0900	South - adjacent to test site (downwind) (north of outside berm 1, 2 + 3)	①	0-9% LEL, 20.9% O_2, 0 ppm ~~H_2S~~ HS	(H_2 would not work)
		②	0.02 mR/hr	
		③	0 ppm HCN	
		④	0 ppm $COCl_2$	

Cay

1346	North of berm 2 exclusion zone (ERCS crew inside preparing to package outlines)	①	0-9% LEL, 21.0% O_2	0 ppm HS
		②	0.02 mR/hr	
		③	0 ppm HCN	
		④	0 ppm $COCl_2$	

1630	N. of exclusion zone B	①	0-9 % LEL, 20.9 % O_2
		②	0.02 mR/hr
		③	0 PPM HCN
		④	0 PPM $COCl_2$

Carol A Geraghty

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Photo tracking

Roll	photo	time	Dir	Subj	Phot/Witness
6	9	0855	E	Test of lithium battery reacting w/water smoke was generated	Erfani/Geraghty
6	10	1125	E	ERCS crewmen removing visqueen from small (berm 3) outside berm to allow crewmen to access batteries to place in oil filled drum	" "
6	11	1127	N	Small berm (3) with charred batteries	" "
6	12	1129	N	ERCS placing charred batteries into mineral oil filled drum	
6	13	1130	NE	workers placing Litium batterys inside mineral oil drums	Erfani Geraghty
6	14	1132	E	worker placing battery chips inside mineral oil drum	"
6	15	1133	E	Same as above showing level "B" activities	"
6	16	1137	NE	Same as # 15	"
6	17	1351	S	ERCS crewmen removing visqueen from Outside berm area E in preparation for packing lithium batteries in mineral oil/drums	"
6	18	1355	SE	ERCS placing Lithium batteries in mineral oil filled drum	"
6	19	1445	NE	workers placing Batterys inside drum	ERFANI Geraghty
6	20	1450	NE	Same as # 19	" "
6	21	1456	down	This picture shows amount of Mineral oil inside the drums.	" "
6	22	1533	East	Riedel Crew placing batterys inside drum	"
6	23	1603	down	Lithium organic battery	"
6	24	1720	down	drums containing Lithium batterys before addition of Mineral oil	"
6	25	1730	down	addition of mineral oil to Drums	"

Carol Geraghty

T06-9206-14 Lithium of Lubbock Sun 6-21-92

have some type of reaction. A brand new cell was placed in oil - no immediate reaction. The old cell seemed to be forming some yellowish product and giving off bubbles (few). The new cell in oil had a bluish tinge - the test will be checked periodically to determine the true effects. CAS

0940 Kim Hann from City of Lubbock Water Utilities arrived on site to observe site activities.

- OSC requested TAT Erfani contact channel 28 to obtain a tape of the previous fire at the site (806) 745-2828 CAS
- ERCS are continuing to setup air lines and drums in prep. for initiating stabilization. ERCS continues to review technical info on batteries.

1022 Kim Hann off site CAS

1030 ERCS will begin adding outside lithium batteries to mineral oil filled drums. It was determined that since new battery cells do not bubble and old wet cells do, that the only reaction is that between the water and the lithium forming hydrogen + LiOH - corrosive - ERCS will be venting drums if gas formation is observed. CAS

1045 ERCS setting drums containing Mineral oil at north portion of the berm (containment) outside in front of Bat #1.

1100 TAT Erfani called Barcelona Court to leave a message for OSC ~~Greg Carlton~~ Craig Carroll when he check in to meet us at the site. He has not checked in yet at this time. Three ERCS workers Malcom Manifee, Humberto Lopez and Steve Woodraska

1122 suited level "B" protection gear and entering hot zone area B (outdoor berms). ERCS are placing charred batteries from outside berm 3 into mineral oil filled drum. A few bubbles were observed forming but no major venting

1125 Kim Hann from City of Lubbock Water Dept returned to the site to observe activities

Carol A Straughn

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1133 EPA OSC Mr. ~~Greg Carroll~~ Craig Carroll CAS 6/21/92 onsite at this time work in progress at this time Riedel Crew: Steve Woodraska, Malcom Manifee and Humberto Lopez out of HZ (area "B" - outside berms) at this time EPA OSC Mr. Fife approved level "C" work for outside at this time. Riedel completed one (55G) drum ——

1207 Crew out for lunch break (TAT members Mo Erfani & Carol Geraghty, OSC members Greg Fife and ~~Greg Carlton~~ Craig Carroll ← ME and Riedel members Hank Harder, Mark Nichols, Matt Salinger, Malcom Manifee, Humberto Lopez, Steve Woodraska); Steve Nowak remains onsite. Kim Hann

1315 also left the site. onsite work in progress; lunch break completed (TAT members Mo ERFANI and Carol Geraghty, OSC members Craig Carroll and Greg Fife, Riedel Crew). —— ME

1330 ERCS Crewmen M. Manifee, H. Lopez & S. Woodraska are dressing in level C PPE in preparation for continuing to package lithium batteries located outside in berm areas 1+2 into mineral oil filled drums. Crews have downgraded from level B because no smoking or fuming has been observed from Berm 3 stabilization and the area is outdoors and well ventilated. If any signs of reaction or venting are observed, crews will immediately leave the area - TAT will conduct intermittant perimeter air monitoring. —— CAS

1348 ERCS Crews MM, HL & SW entered exclusion zone B (outside berm 2) and are removing visqueen from open top drums & boxes. Lithium batteries are being unwrapped from their plastic packaging and placed in the mineral oil

1400 Kim Hann (C of L water Utilities) returned to the site.

1415 ERCS Crew MM, HL & SW out of exclusion zone "B"

1445 at this time workers: MM, HL & SW on~~site~~ HZ placing

Mohsen Erfani

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Batterys inside the mineral oil drums at this time. Riedel:

1510 MM, HL & SW out of HZ at this time.

1530 MM, HL, SW enter hot zone (Level "C") to continue work in the hot zone at this time. Workers are placing Lithium batterys inside the 55G metal drum containing mineral oil. Work is conducted in level "C" protection

1645 Gear. OSC Mr Fife requested for more Riedel crew (workers) to speed up the clean up process. Workers are placing Batterys inside the mineral oil drums. A total of four (55G metal) containing mineral oil filled with Batterys (Lithium). Procedure of clean up process changed to extent where dry batterys (Lithium) are placed inside the drums and then mineral oil added. Two drums of Lithium Batterys are filled with mineral oil after the batterys are placed inside the drums. Riedel workers MM, HL and SW out 1725 of ht zone at this time; Two drums are filled with mineral oil. Drum (#) D302 and # D304 were filled with mineral oil after addition of Lithium batterys. - NTL

1730 ERCS M.M., H.L. + S.W exited exclusion zone and conducted personal decontamination - all remaining unsecured drums + pallets remaining in outside berm 2 were recovered with VB green. ERCS is currently locating the 4 repackaged drums inside of Bay 2 - bungs will be left crack to vent any possible H_2 gas. Approximately 1/3 drum of mineral oil is required per completed/stabilized drum. - CAY

SUMMARY 2 OSCs (Fife + Carroll), 2 TAT + 7 ERCS.

Site visitors Kim Hann C of L water Utilities activities - ERCS conducted bench test of lithium battery in water and in mineral oil. ERCS initiated containerizing the Lithium batteries from out doors. Batteries were removed from plastic casing and placed in 55 gal drums

Carol A Gerashts

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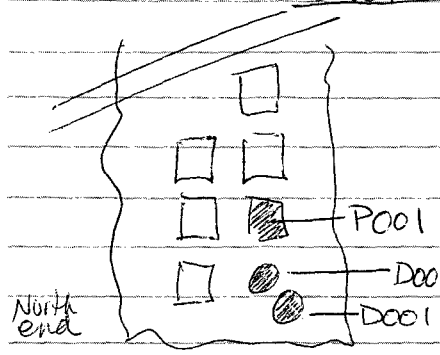
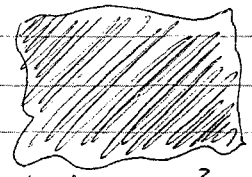
Initially level B was used and oil was placed in the drum prior to battery addition. This was later changed to level C and staging batteries inside of drums before adding oil.

Numbering Scheme - All original pallets and drums observed in the original inventory (see p 14-15 + 18-20) will be labeled D001 → for drums and P001 → for pallets. New drums created with contents from the old original inventory will be noted as D300 → for created drums.

SUMMARY OF CONTAINERIZATION



ORIG AND Created Drum	CONTENTS	SOURCE	STATUS
D300	Li bat. stored in oil	outside Berm 3 and Drum D001	F
D301	Li bat. stored in oil	D001, D002	F
D001	burned cardboard	sorted from D002	F
D002			E
D302	$LiSO_2$ bat in oil	P001	F
D303	$LiSO_2$ bat in oil	P001	partial
D304	$LiSO_2$ bat in oil	P001	F



Outside Berm 3

See pg 15 for overall map

Created drums were staged in bay 2, loosley bungeed

areas addressed today

Carl

1800 OSC's Greg Fife + Craig Carroll, TATS Carol Geraghty and Mo Erfani and EPCS Hank Hinder, Mark Nichols, Matt Salinger, Stanton Nowak, Malcone Manifee, Humberto Lopez + Steve Woodraski departed the site for the day. Security Jason arrived on site for the night.

2030-2130 TATS Carol Geraghty, + OSC's Greg Fife + Craig Carroll completed Polrepo 1, 2, 3 and sent them for distribution via e-mail to @PAREPTX

Carol A Geraghty

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T06-9206-14 Lithium of Lubbock Mon 6-22-92

0700 OSC Greg Fife, Craig Carroll, TAT's Carol Geraghty & Mo Erfani and 7 ERCS crewmen: Hank Harder (FM), Mark Nichols (F), Matt Salinger (C, SSO), Stanton Nowak (FC), Malcone Manifee (T), Humberto Lopez (T) & Steve Woodraski (T) are on site and conducting a workplan and site safety meeting, Weather: partly cloudy, cool - upper 60s - low 70's highs expected in the 90's winds are near calm with light winds from the south. Rain was experienced at the site overnight workplan - Continue to stabilize + containerize the outside Lithium batteries. If it begins to rain recover area + work inside warehouse. SSM - main hazards reaction of Lithium + corrosive in batteries. Due to rain, very slick avoid trip/slip. Use concrete ramp to access warehouse (All ERCS, TAT, OSC + Security in attendance), SSO Carol Geraghty Carol A Geraghty; pm Mo Erfani Mohsen Erfani ERCS will be in level C during containerization operations CG

0720 ERCS M. Manifee, H Lopez + S Woodraski are dressing in level C PPE preparing to Enter exclusion zone B to containerize additional lithium batteries. CG

0730 MM, HL & SW enter hot zone at this time. ME

ERCS crews are in level C PPE packaging boxes in outside Burn 2 area. CG

0800 Security guard departed the site.

0805 TAT Mo Erfani contacted chanel 28 news to request tape of previous fire and to inform them of the cleanup action as requested by OSC Greg Fife Some of previous drums filled with Batteries show that it may generated some chemical reaction due to a white vapor. M3000 reading did not indicate of presence of any H2S but showed 30% LEL inside the drum. Also Batteries outside of the Building (Staging Area from previous fire) shows a chemical reaction is taking place due to presence of smoke. Last

Mohsen Erfani

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T06-9206-14 Lithium of Lubbock Mon 6-22-92

Air Monitoring Equipment (background same as p 31)

① Aim 3000 Calibrated 11/25/91 EPA 859118
② HCN Monitox Factory Calibrated EPA 6-6615
③ $COCl_2$ Monitox Factory calibrated EPA 696618

Time: 0745 Location: East of Bay #1, outside
① 0-9 % LEL, 20.9 % O_2, 0 ppm H_2S
② (0) PPM : Background HCN
③ (0) PPM : Background $COCl_2$ ME

Time: 1325 Location East of Bay #1, outside
① 0-9 % LEL, 21.0 % O_2, 0 ppm HS
② (PPM) → Background (0)
③ (PPM) → Background (0) ME

1447 Location perimeter of exclusion zone B, 15' west
① 0-9% LEL, 20.9% O_2, 0 ppm HS
② 0 ppm HCN
③ 0 ppm $COCl_2$ Coy

1630 West of outside Berm (#)1
① 0-9 % LEL, 20.9 % O_2, 0 PPM HS
② 0 PPM HCN
③ 0 PPM $COCl_2$

Carol A Geraghty

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See pg 5 for camera used

Roll	Photo	time	Dir	Subj	Photo/with
7	1	0755	E	workers are placing batterys inside the 55G metal drum.	Erfani Geraghty
7	2	0905	E	workers are taking visqueen off staging area from previous fire	" "
7	3	1015	E	workers overpacking	"
7	4	1016	E	DRUMS from drum staging area	"
7	5	1335	W	drums of Lithium thionyl chloride inside Bay #1	Erfani Geraghty
7	6	1335	W		"
7	7	1335	W		"
7	8	1345	E	View Lithium SO2 Battery	"
7	9	1440	NW	Batteries from unmarked box in quadrant 3H (box 2)	Geraghty Erfani
7	10	1605	down	Mineral oil & Battery inside the 55G drum	
7	11	1630	E	workers placing Battery inside drum	"
7	12	1715	NE	Same as #11	"
7	13	1830	NE	workers covering pallets at outside ~~Bay~~ NE Berm #1	"
7	14	1855	E	Cuisauce is utilized	"

TUE 6/23/92 Photographs

7	15	0800	E	View of new Bobcat onsite	Erfani Geraghty
7	16	0940	E	clean up activities at outside Berm area	"
7	17	0945	SE	Same as #16	"
7	18	1430	E	Clean-up activities outside berm area	"
7	19-20	1600	SE (down)	Battery found in outside mfg berm area - Li-Cl2OS - Altus Corp.	

Carol A Geraghty

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T06-9206-14 Lithium of Lubbock Mon 6/22/92

Night there was a heavy rain at the area - crew
0830 from Riedel (MM, HL & SW) out of HZ at this time
Late entry 0845 - TAT Carol Geraghty contacted the National Weather Service in Lubbock to obtain previous rainfall / Severe weather conditions for Lubbock county since June 8th (Gary - (806) 762-4647)
Tornado Watches - 6/8, 6/11, 6/12, 6/13, 6/20; Tornado Warnings - 6/11; Thunderstorm (Severe) Watch - 6/9; Severe Thunderstorm Warning 6/8, 6/11, x3 6/13, 6/20.
Rainfall for month of June (Day - "rain): 1 - 1.78, 2 - 0.07, 6 - 0.06, 7 - 0.03, 8 - 0.14, 11 - 0.33, 12 - 0.05, 13 - 0.76, 20 - trace, 21 - 0.07, 22 - 0.18 so far
Total June rainfall through 21st 3.29" ——— Cay,
0845 MM, HL, SW enter hot zone to take visqueen off staging area from previous fire. They (MM, HL, SW) 0908 out of HZ at this time. ——— ME
0925 - ERCS Chemist M. Salinger detected a pH of 2 from the inside condensate of the pallets staged outdoors. The fire department had used soda ash / lime in the previous fire fighting process. ERCS Chemist plans to conduct haz cat tests on the white material found inside the open top drums. ERCS crew MM, MN, S.W. and HL are arranging 85 gal overpack drums. The open top drums located outside are to be overpacked, filled with mineral oil & allowed to vent while
0935 ERCS are on-site. Kim Hann onsite at this time ——— ME
OSC requested making preparations to collect bag air samples - will contact Texas Air Control Board ——— Cay
1000 Workers (MM, HL, SW) entered hot zone at this time to continue work on outside drum staging area. EPA OSC Mr. Fife contacted EPA ERB in Edison New Jersy to obtain information in regard to clean up activities and fumes that
Mohsen Enfani

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generated from the drums. Evidently this is reaction that taking place: $H_2O + SOCl_2 \rightarrow SO_2 + HCl$ and Sulfur dioxide and hydrogen chloric acid may be in form of gases that are generated at the drums filled with Lithium batteries

OSC Greg Fife spoke with Joe Lafanaro, Branch Chief at ERT. In summary of the information recorded above, two types of Lithium batteries are known to be on-site Lithium/thionyl Chloride ($SOCl_2$) and Lithium/SO_2. The $SOCl_2$ can react with water to for Hydrochloric acid and sulphur dioxide also the Cl will dissolve in the mineral oil. The SO_2 can react with water to form sulfurous H_2SO_3 and sulfuric acid H_2SO_4. Thus, acid fumes may be released. The lithium reacts with water to form lithium hydroxide and Hydrogen gas. Two basic options - react batteries in caustic + scrub out acids, then stabilize lithium in oil (expensive + long term) or continue as originally planned and allow for slow reactions / venting occasionally.

1020 Jeff Bertl, with Texas water Commission, on site speaking with OSC members Mr. Fife and Mr Craig Carroll

1040 at this time: Jeff Bertl and Kim Hann offsite at this time. The city of Lubbock placing barrier at the road by the site. Workers are at the hot zone ~~placing~~ overpacking drums.

1118 MM, HL & SW out of hot zone at this time. OSC Fife speaking with Supervisor (Henry DAY) → 806-767-3232 of Water Utilities at this time. TAT Member Carol Geraghty is working on soil sampling plan (Caspar)

1130 at this time: ERCS Crew (MM, HL, SW, MS & MN, HH) offsite for lunch (except for standby Novak). TAT Geraghty continues working on Casper (Soil sampling plan)

1150 Henry DAY, Superintendent Wastewater Treatment, off site

1155 OSC members Fife and Carroll, TAT Members Geraghty Mohan Efri

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T06-9206-14 Lithium of Lubbock Mon 6/22/92

and ERFANI offsite for lunch break at this time —

1230 ERCS crew return to site; OSC ~~left~~ ME Fife left for DALLAS; TAT members Geraghty, Erfani; OSC Carrol onsite around 1318 hrs. Riedel crew MM, HL & SW

1245 SW in hot zone to continue work and overpack drums. OSC Mr. Carrol is talking with 3 men from 1320 Bergstein oilfield services, INC. They left at 1330 hrs.

1345 ERCS crewmen MM, HL + SW exit hot zone and take stress relief break.

1400 TAT M. Erfani is delivering Polreps 1-3 to City of Lubbock and TNC and running site errands.

1405 RPM Ky Nichols on site meeting w/ OSC Craig Carroll

1430 ERCS M.M. HL + SW return to hot zone to continue containerizing outside batteries. TAT Geraghty assisting ERCS chemist M Salinger with battery documentation and inventory.

1530 ERCS M.M. HL + SW out of hotzone to take stress break

1535 TAT Erfani completed running errands for site.

LATE ENTRY — RPM Ky Nichols departed the site at 1515. Rates disk was requested from RCMS Support

1600 MM, HL & SW (Riedel crew) enter hot zone at this time to continue work at drum staging area outside in front of Bay #1. Texas Water Commission representatives Mr. Jeff Bertl and Malcolm Laing onsite with Mr. Craig Carrol EPA OSC at this time (1600 hrs). Texas Water Commission representatives

1630 Jeff Bertl and Malcolm Laing left the site at this time.

Work in progress at the hot zone; workers are working on the following DRUMS: D-305, D306, D307, D308, D309, D310, ~~and~~ ME, D-311 and D-312 ME

Source P002 → To → D-305, D-306 a D-307

Also 55 Gallon overpacked into D004, D005, D006, D007, D008, D009, D010, D011, D012; they will

Mohsen Erfani

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T06-9206-14 Lithium of Lubbock Mon 6/22/92

Continue to work on: D 308 and D 309 (which are Lithium/SO2 in oil 55 gallon overpacked) ⇒ source is p003. All these drums are filled or will be filled with mineral oil. *: D011 & D012 → 30gal op in 55G workers are concentrating at D-310 (Placing Batteries inside this drum - it will be filled with mineral oil at later time). D006 through D010 are overpacked drums (55 Gallon over-packed inside 85G drums). Weather is hot about 90°F; work activity in level "C" protection Gear. Riedel Crew: MM, HL & SW out of the hot zone at this time to take their afternoon break → (1720 hrs).

1725 New Security person Cody Parker on site and becoming familiar with site safety plan and site in general at this time. Crew preparing for HZ entry to continue work at outside Berm area and fill drums with Mineral oil. Cody parker is geting familiar with the site and its hazards. TAT Member Carol Geraghty is utilizing computer to generate site ~~safety~~ ME sampling plan and also working on TAT site safety plan. Riedel crew: MM, HL 1755 & SW entered hot zone at this time. Work in progress at the hot zone (outside Berm area).

1815 Riedel (RM) Hank Harder completed informing Cody Parker of the site situation at this time. TAT member Carol Geraghty completed TAT site safety plan at this time.

Work in progress at this hour.

Riedel Crew (cleanup crew) are staging drums to be filled with Mineral oil. Visqueen is placed on pallets on outside ~~Bay~~ Berm #1 area to protect these pallets against possible rain and wind.

* Late entry: Response Manager (RM) for Riedel Mr. Mohr Eifer

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Hank Harder Contacted Texas Air Control Board (~~make~~ will a visit) to discuss Air sampling for possible fumes if generated from drums filled with Mineral oil; he obtained Name of a Lab in area to contact if needed. work in progress at 1840 the hot zone at this time. D305 through D312 are staged west of Berm #1 (outside); work completed Till D-310 for Today. workers are Completing the 1858 stage of drum at this time. out of HZ (MM, HL & SW)

Summary of Containerization

Created DRUM	Contents	Source	Status
D 305	Lithium/SO2 in oil	P002	F
D 306	↓	P002	F
D 307	↓	P002	F
DΦΦ3	Cardboard debris, batteries in oil	55G overpacked in 85G	F
DΦΦ4	↓	↓	F
DΦΦ5	↓	↓	F
DΦΦ6	↓	↓	F
DΦΦ7	↓	↓	F
DΦΦ8	↓	↓	F
DΦΦ9	↓	↓	F
DΦ1Φ	↓	↓	F
DΦ11	↓	30G overpacked in 55G	F
DΦ12	↓	30G overpacked in 55G	F

Created	Source
D 305	PΦΦ2
D 306	PΦΦ2
D 307	PΦΦ2
D 308	PΦΦ3
D 309	PΦΦ3
D 310	PΦΦ3

LiSO2 Batteries in O2 placed in 55gal Overpacks

1900 ERCS: MM, HL, SW, HH, MN, SN & MS, TAT CG & ME, OSC CC offsite for the day

Mohsen Safari

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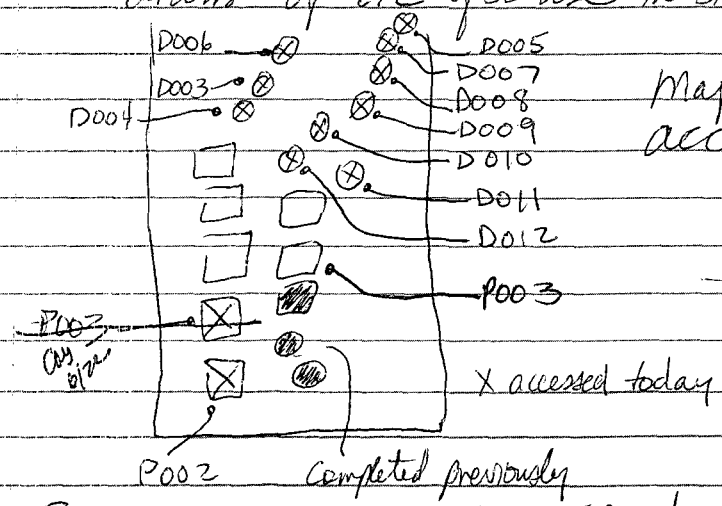
TD6-9206-14 Lithium of Lubbock Mon 6/22/92

LATE ENTRY - 1800 ERCS MN procuring an additional 4-55 gal drums of OIL for use in stabilizing batteries.



Map of drums / pallets accessed / containerized today

Summary - 2 OSCs (OSC Fife demobilized this afternoon), 2 TAT and 7 ERCS. Visitors - Kim Hann (C of L), Jeff Bertl (TWC), Henry Day (C of L), Ky Nichols (EPA RPM), Malcome Laing (TWC) Materials - ERCS procured 4-55 gal drums of OIL (12 to date) Work activities OSC confirmed stabilization procedures after consulting with EPA ERT. ERCS crew continued containerization + stabilization of materials stored outside. All outside open top drums were overpacked and work continued with containerizing batteries from pallets (see pg 44+45 for daily summary). TAT continued air monitoring, prepared detailed SSP and began working on QASPER for soil sampling of burn. ERCS obtained information from TACB on collecting an air sample from smoking drum. See pg 41 for technical comment on why mineral oil filled drums continue to burn.

Carol A Geraghty

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TD6-9206-14 Lithium of Lubbock TUE 6/23/92

0700 OSC Craig Carroll, 2 TATS - Mo Erfani (pm) + Carol Geraghty (SSO) + 7 ERCS crewmen; Hank Harder (RM), Mark Nichols (F), Matt Salinger (C), Stanton Nowak (FC), Malcom Manifee (T), Steve Woodraski (T) + Humberto Lopez (T) arrived on site. ERCS HH briefed security guard Jason on details of SSP and after completing review, guard signed plan. Crews conducted workplan + safety meeting; weather: Clear skies, winds near calm, light wind from north, temp in the 70's highs expected in the 90's workplan - continue containerizing batteries from outside berm area cardboard pallets. Bobcat will be brought on site to move berm to allow for easier access. SSM - shift lunch break to ~1300 to allow longer work period in cooler weather. Afternoon work shifts will be reduced to 45 min. Reviewed PELs + safe work practices. level C for ERCS in Exclusion zone B - if heavy fuming is observed, will upgrade to B - stay upwind of activities. TAT - level D perimeter work, avoid trip/fall chemical contact. SSO Carol Geraghty Carol Geraghty pm Mo Erfani Mo Erfani

0730 ERCS crews are staging additional drums outdoors in preparation for containerization.

0740 A toyota tractor skid steer (bobcat) B50K arrived on site - procured by ERCS to move berm soil.

0745 ERCS M. Nichols in level C - using bobcat to restage berm soil. ERCS S.W. in level D - restaging the overpacked drums completed yesterday east of the work area. H.L. in level C filling overpacks from yesterday with mineral oil ERCS M.M assisting with level D activities

0830 ERCS MM entered Hot zone in level C to assist in berm restaging. TAT air monitoring, photodocumenting and TAT C6 completing administrative paperwork.

0845 Kim Hann and Kyle Nichols (EPA-RPM) on site at this time.

M Mo Erfani

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TOG-9206-14 Lithium of Lubbock TUE 6/23/92

Air Monitoring Equipment See page 31 for instrument description

Time 0830

BACKGROUND

O_2 = 20.9, H_2S = 0 ppm, HCN = (0) ppm, $COCl_2$ = 0 ppm

Location: NE, NW and North of outside Berm area

0839 ① 0-9 % LEL, 20.9 % O_2, 0 (ppm) H_2S

② (0) ppm HCN

③ (0) ppm $COCl_2$

0945

Location NE, NW & N. of outside Berm

① 0-9 % LEL, 20.9 % O_2, 0 (ppm) H_2S

② (0) ppm HCN

③ (0) ppm $COCl_2$

1100 Air monitoring

On concrete pad east of exclusion zone B

① 0-9 % LEL, 20.9 % O_2, 0 ppm Hyd Sulf

② 0 ppm HCN

③ 0.0 ppm $COCl_2$

1415 Air monitoring

On concrete pad east of exclusion zone B

① 0-9 % LEL, 20.9 % O_2, 0 ppm Hyd Sulf

② 0 ppm HCN

③ 0.01 ppm $COCl_2$

Carol A Geraghty

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T06-9206-14 Lithium of Lubbock Tue 6/23/92

0930 Work in progress at outside Berm area. Clean up Crew took ~~off~~ ME visqueen off DRum/Pallets at outside Berm area and placing Batteries inside drums. Workers used New Bobcat to transfer Clay from outside Berm #1 to North Portion of Berm #2. workers are out of 1000 HR at this time. ME

1005 TAT Erfani running site errands and checking out of hotel.

1035 ERCS M.M., M.N, S.W + H L entered hot zone in level C and are all containerizing batteries removed from pallets stored outside. Temp is in 90's.

1045 TAT Megan Fedder arrived on-site from mobilization from Houston - she is reading the SSP and conducting a tour of the site with TAT C. Geraghty.

1135 TAT M. Erfani returned with Fed Ex supplies. TAT M. Fedder is bringing M Erfani to airport and breaking for lunch.

1135 ERCS crew M.M. MN, SW + HL exited the hot zone and are taking a stress break.

LATE ENTRY: TAT C. Geraghty made arrangements for the EPA fax and copy machine to be shipped to the site

1215 ERCS crewmen MN, MM, SW + HL enter hot zone in level C PPE to continue containerizing batteries from outside storage area 2. Coy

1240 TAT M. Fedders returned to the site and is conducting contractor monitoring / photo documentation.

1250 ERCS hot zone crew exits hot zone + is conducting personnel decon in preparation for lunch break.

1300-1400 OSC C Carlton, + ERCS H Harden, M Nichols, Matt Salinger, H. Lopez, M. Manifee + S Woodraski offsite for lunch break

ERCS S Nowak conducting site errands and lunch break.

1400 ERCS MN, Coy 6/23 MM + HL in level C in hot zone continuing to containerize batteries from outside berm area 2. ERCS M M + SW in level D moving additional empty drums into area adjacent to exclusion zone for future use

Carol A Geraghty