Scrap Tire Clean Up Forum Notes
Chicago – February 23-24, 2004

Monday, February 23rd

1:00 **Welcome**

Christopher Prins, Senior Policy Advisor, U.S. EPA Headquarters
Todd Marvel, Scrap Tire Program Manager, Illinois EPA

- IL estimated 15MM tires when act was started; 1,200 sites cleaned up; now cleaning up sites as they are found
- Use of aerial surveys to identify sites
- Intergovernmental agency cooperation (DECA, Dept. of Ag, IL EPA, etc.)
- 8 states = 80% of all tires in stockpiles
- Market incentives: SW exemption (?) for tires re-used
- IL is net importer of scrap tires

1:15 **State Involvement**

Moderator: Paul Ruesch, U.S. EPA Region 5

Rhonda Zimmerman, Michigan DEQ

- Ongoing training (fire dept, etc.) important b/c personnel change

Jack Brunner, TetraTech EM, Inc.

- Mapping initiative throughout GL states driven by BNTS
- Goal was consistent data collection and mapping
- Next step is a regional brochure to promote piles as a resource

Mel Pins, Iowa DNR

- No program before 1996; banned tires from LF in 1991
- "even when landfilling was legal, dumping was cheaper"
- Majority of end use is TDF or civil engineering
- Successful program view goal as "cleaning up the pile/problem"
- Good cleanup RFP examples obtained from WA
- Get press out there on Day 1 of cleanup
- Make sure cleanup contractors have experience and a market
- Use a weighted bid evaluation: price per ton as removed and processed (interagency team review of bids)
- Price; end-markets; cleanup plan; experience
- $5K bid bond
- Performance bond: not full cost b/c would not leave site any worse than start ($100K-1MM)
- Involve local government in cleanups
- Progress w/cleanups away from the road (shows progress and reduces potential for additional dumping during cleanup)
- $72/ton;

- Liens against property; civil judgments (even though not collected ruins credit and could garner future legitimate income)
- IDNR did not issue themselves or contractors permits for cleanup activities
- Greenman Technologies (80% of Iowa cleanup work); UT? (20% of work)
- Difference between RFP and Invitation to Bid(?)
- Cleaned up: 2/3 TDF; 1/3 civil (LF leachate)

Todd Marvel, Illinois EPA

- $2.50/tire user fee per tire
- Some funding went to mosquito larviciding program; now also .50 to new Emergency Public Health Fund (WNV task force)
- Actually getting 90% of each $2 collected
- "sunset" on fee is 2008
- Fund use: 2/3 for contractual cleanups; 1/3 for admin (inc. equipment and travel), inspection & enforcement
- 1,000 inspections/yr (mostly retailers)
- 100 cleanups/yr; mostly Consensual Removal Agreement (CRA): up to 1,000 tires provided owner signs the CRA
- Countywide collections (25-30/yr); can be a headache b/c of people that are not eligible abusing it; mobile shredders sometimes used
- Forced Removals: Notice to property owners that have a threat to human health or env
- IL diff from IA: MISSED THIS INFO
- End use grants (playgrounds, running tracks, athletic fields**, horse arenas); IL provides 90% of $$$; interstate rest area playgrounds; tires don't have to be produced in state (no crumb rubber in IL)
- Must give owner opportunity to clean up themselves; have to prove "owner failed without sufficient cause"
- MUST pursue cost recovery; almost never received $$$ from punitive damages; has to be done under constitutional limitations therefore access agreement or warrant is obtained, 55.3.b allows to go in if risk to human health or env but give up right to punitive damages
- Think about what you will be asked in court when determining cleanup approach
- Program cost for countywide collections: ave collection $30K; highest collection $75-90K; $350-400K/year
- Tire fee applies to new AND used tires; difficult to track; IL gets about 2/3 of fees they could collect—even with aggressive program

Terry Gray, TAG Associates

- Highlights of Florida program
- Pre-qualification of contractors (RFQ); site specific bids by task assignments
- Initially 100% bonding; later 50%; also insurance requirements

- Forcing tires to markets can be counterproductive
- Cost: per ton or per job? Per ton issue is contamination; per job requires contractor's price to be higher b/c of contingencies
- Prioritization: look at size, risk, etc. thru objective/consistent analysis *(water/air/population/quantity)*
- For air: plumes can stay low to ground for about ½ mile
- "triple E" more of a problem than WNV
- Need to "KISS" for prioritization method and have consistent personnel conduct the prioritization
- Group sites by ranking breaks

3:30 **Planning**

Moderator: Todd Marvel, Illinois EPA

Terry Gray, TAG Associates

ESTIMATION

- "calibrated pace" has held up in court
- take photographs w/reference objects for review/verification after inspection
- 10 PTE/cubic yard in general (but varies with age, temp, depth, rims)
- Walk top of pile: may not be what it seems from ground; get a feeling for density

ABATEMENT

- Site-specific P&S
- Establish roles and responsibilities for local government (often "scared" of piles)
- POTENTIAL ISSUE: MAY NOT WANT MAKE ADDRESS INFO READILY AVAILABLE—COULD ATTRACT ADDITIONAL DUMPING
- Contaminated scrap tires not suitable for crumb rubber; OK for TDF and civil engineering apps
- 20 lbs = PTE or 200 lbs = 1 cubic yard (ESTIMATE)
- NOTE: Mel Pins has PTE calc case study
- What comes out of the pile is not the same as what goes into the truck (area/volume in the pile is different due to compaction, etc.)
- Biggest error: not thorough estimate; liberal use of 10 PTE/cubic yard factor
- ***Stockpile cleanups should not affect the market b/c this would impact ongoing generation of tires, which could be creating new stockpiles; need to check end use facility to verify they can handle load of a cleanup
- Need to verify the benefit of end use (roads, etc.) and not just create a "lateral landfill"; coordinate with DOT, etc. well in advance
- Appropriate contaminated tire uses: road base (w/i geotextile net/containment), LF liner, LF gas collection channels (but need enough soil on top to achieve adequate compaction)

Jim Waldron, TRI-Rinse, Inc. (home state is MO)

- Tri-Rinse: 33MM tires to date; sites >100,000 tires
- Virginia: more tires disposed of for lowest cost
- Time frame of cleanup important (dictates number and type of equipment)
- MBE participation often required; need to be state-registered
- Lump sum bids upped by about 25%
- Documentation: manifests, tip tickets
- Restoration: may vary from site to site (regarding, vegetation, etc)
- Tire mix more important than volume (affects thru-put, equipment requirement, etc)
- Rims: could finish tire processing before de-rimming, which causes a problem; they need to keep up
- Smaller companies pay higher bonding costs b/c higher risk
- Bond preferred over escrow account, which ties up funds
- Contractors need to understand up-charges of subs, esp. trucks
- Tipping fees may be raised based on need/demand
- Don't want to handle tires too many times—important to consider for difficult terrain
- Want to be able to move shredder closing to moving supply of tires
- ½ gallon of water per tire need to be considered (runoff, muddy site conditions, etc)
- If an area gets "messed up," can leave it temporarily
- Site security important (hire local service or individual 6AM-6PM) to prevent vandalism; lock trailers, cabs, gas caps
- Processor: best to bill every 15 days; providing manifests helps with payment
- Want less than 1/3 of staff to be new, esp. supervisor
- Use weekly reporting to ensure timely production according to established schedule
- Good equipment: excavator probably the best
- Best to pre(rough)-grade sites as you work through piles; reduces work required at end
- For bigger sites, generally go with local firm to restore/seed sites
- JOB SITE PHOTOS (before, during, and after) to document progress and potential issues
- OTRs: can use hydraulic shears to cut them up for eventual shredding; using # instead of weight OK b/c # that can be sheared/day is most important (not weight)

Tuesday, February 24TH

8:30 **Post – Clean Up**

Moderator: Jack Brunner, Tetra Tech EM, Inc.

William Simes, USEPA Region 5

- Atwood site: did a threat analysis

- How do you put out a fire? "you don't"; encapsulate/bury it
- If pile is small or broken up, can "pull out" tires away from center of pile and wet them down as you pull back
- Breaking up a large pile takes too long
- Need to consider both "real and perceived" health concerns
- Effects: particulates (white smoke) is worst; black smoke is larger particulates (>10 microns) and therefore more easily inhaled; ATSDR hotline
- Particulate fall out can affect surrounding property
- Water contamination: VOCs, TSS, and SVOCs in water can be controlled by ditches and dams; needs to be sampled but delay in obtaining analysis
- Air: monitoring (RAM and mini-Ram for particulates); particulates may show up 1 mile+ from site so need to go way out and work back; total organics; benzene specifically; 30 people in 24-hr period doing air monitoring only; SUMMA canisters for long-term (6-8 hours)
- Coordinate w/DNR regarding sensitive eco populations
- Soil: oils & sheens on-site; if control of water, off-site soil not as much of a problem, but nuisance issues associated with particulates is an issue
- Chemical additives have not been affective in fire fighting
- Long- (sampling) and short(monitoring)-term health affects need to be considered (biota in nearby stream)
- Small fire $300K; larger fire $2-5MM
- Sprinkler systems not effective for tire fires; indoor storage requires
- Segregate burning tires if possible
- Accelerants: can be effective with limited amount of material but regulatory restrictions
- For soil to bury fire, use material that is cheapest and available sand OK but clay better

Brooke Furio, USEPA Region 5

9:45 **Case Studies**
Moderator: Michael Blumenthal, Rubber Manufacturers Association

Kirby Site – Sycamore, Ohio
Bob Large, Ohio EPA

- Smoke plume over Columbus 80 miles away
- All whole tires; ¼ of site burned
- Used aerial survey to estimate quantity (21MM tires)
- Could not go after Kirby under SW laws b/c "recycling"
- Compared air monitoring data to OSHA levels; used data to deal with public health claims
- Contained water in ditches/pits; transported offsite in tanker trucks
- Contaminants entered stream thru drain tiles; fish kill for 7.5 miles downstream due to lack of DO not direct chemical effects; used aeration to restore stream

- Every time it rained after fire, more oil appeared
- Mined on-site clay to entomb fire residual
- Fire covered w/i 4 days
- Dry tires retained oil/water and released it after heavy rains
- Doubled tire fee to $1/tire to replenish tire fund, which was depleted by Kirby
- 75% of tires to civ eng apps (LF drainage layers, etc); 1 tire from Kirby : 2 new tires
- SW Issues: conveyor belts, bead rings, contaminated tires (bottom 3 feet of tires buried), etc.
- 3:1 direct costs for fire-related : non-fire-related

McMaster's Site - Ohio
Dave Quarterson, Liberty Tire Services, Inc.

- Tires in a ravine and under water therefore difficult to estimate and remove tires
- Proposing "orange peel bucket" to extract tires
- Barclay shredder, then to LF and monofill
- Need to deal with long-term "floaters"
- Removing about 100 tons/day, 5 days/week
- For cleanups, hire a project manager not a tire shredder (plans, permits, experience, financial assurance, beneficial use)
- Need to be reasonable in bond requirements given market

Clean Up Sites – Pacific Northwest
Mark Hope, Tire Disposal & Recovery, Inc.

- Cleanup actions often driven by real estate/redevelopment incentives
- Storage Bond requirements have reduced stockpiling in Oregon
- Security: issues arise if full liability is assumed/required
- Bonding not required b/c site would be no worse off if abandoned; no incidences of contractors waling off site
- Stellar site
    - Fixed price basis; load and haul to LF so would have been better for state to bid on per ton basis
    - What is "clean"? Need to agree before cleanup
- Cross O
    - Winter project: benefit b/c working on hard ground
    - 480 miles to processor
    - Hand-loaded b/c allowed for use of less expensive enclosed trucks
- Erickson
    - No top loading because of wet weather conditions
- Sears Point
    - Private party negotiation
    - Got variance to LF tires in CA b/c of cost issues
    - Tires were contaminated
- Fixed price bids generally 20% higher than per ton basis

Slaughter Site- Bristol, Virginia
Allan Lassiter, Virginia DEQ

- No water used on tire fires, put out surrounding brush, remove pieces w/long reach excavator, let piece flare up, bury piece NOT whole pile
- EUR = end user reimbursement; most tire clean up supported by this (now $100/ton); end user is typically LF using shreds for daily cover
- Owner only cleanups for most sites, but smaller
- Access agreements for site AND adjacent property (see handout)
- $75(slaughter) to $181/ton
- Rough grading done during process; final hydroseeding done by state
- Tipping fee for shreds $0-21 (ave $15)
- 50/50 max ADC
- If not ADC, then leachate collection protection layer and also backfill for gas collection system