



Ripley, NY - Train Derailment March 1, 2016

Chautauqua County Hazardous Materials Response Team



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Chautauqua County, N.Y.

- Chautauqua County is the western-most county in New York, is bordered on two sides by Pennsylvania and on the North by Lake Erie (Canadian Border).
- It is home to 136,400 residents
- 1062 Square Miles – Land
- 438 Square Miles – Water
- 2 Cities, 27 Towns, 15 Villages and 6 Hamlets





Chautauqua County Hazmat Team

- The Chautauqua County Hazardous Materials Response Team was organized in 1981 at the instigation of co-captains Jack Henderson and Dick Manning with the assistance and support of then County Fire Coordinator Ralph Sandquist.
- 53 Men and Women from the 42 fire departments in the county





Ripley, NY



Place IED

Place HAZMAT

Location Search

Map

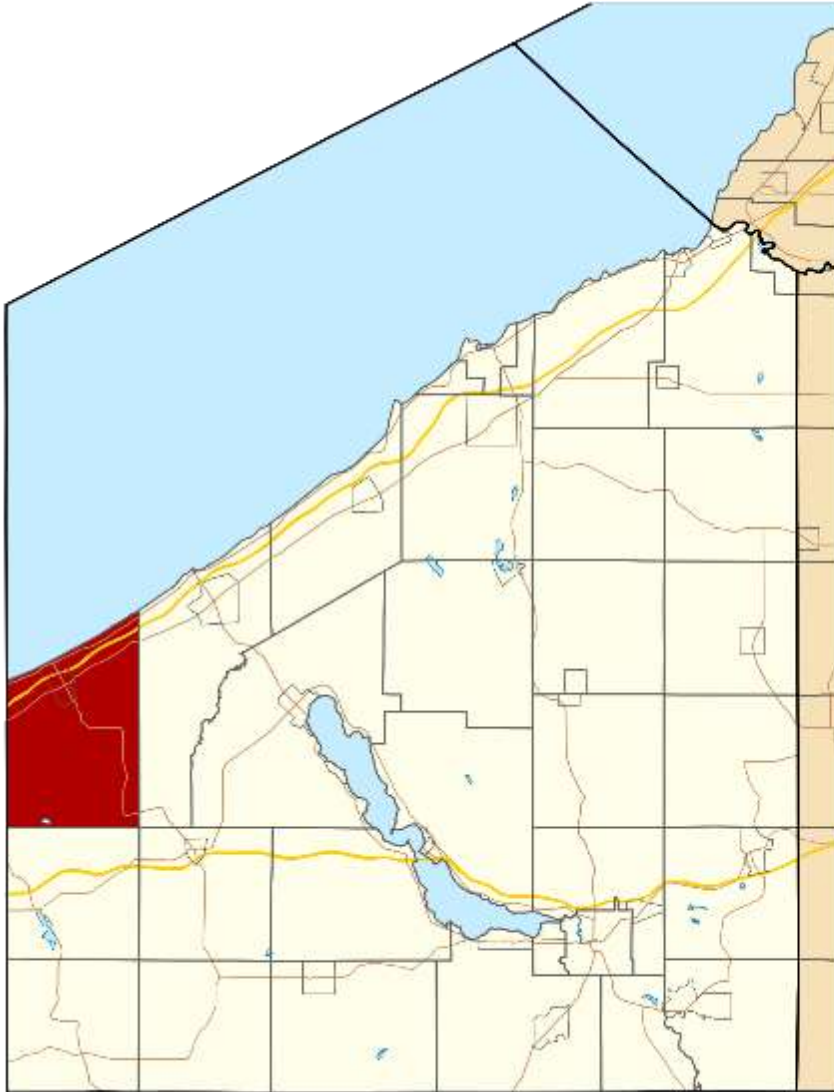
Satellite

Hybrid

Options



Chautauqua County Town of Ripley



Previous Train Derailment - 1997

- The team has responded to several train derailments.
- This one, west of Dunkirk, was literally in the backyard of the County Home and Infirmary.
- 1997
- 55 Cars
- 21 Tankers



Train Derailment Containment

- The train released several thousand gallons of diesel fuel and several hundred gallons of sulfuric acid.
- Lake Erie was less than a quarter mile away.

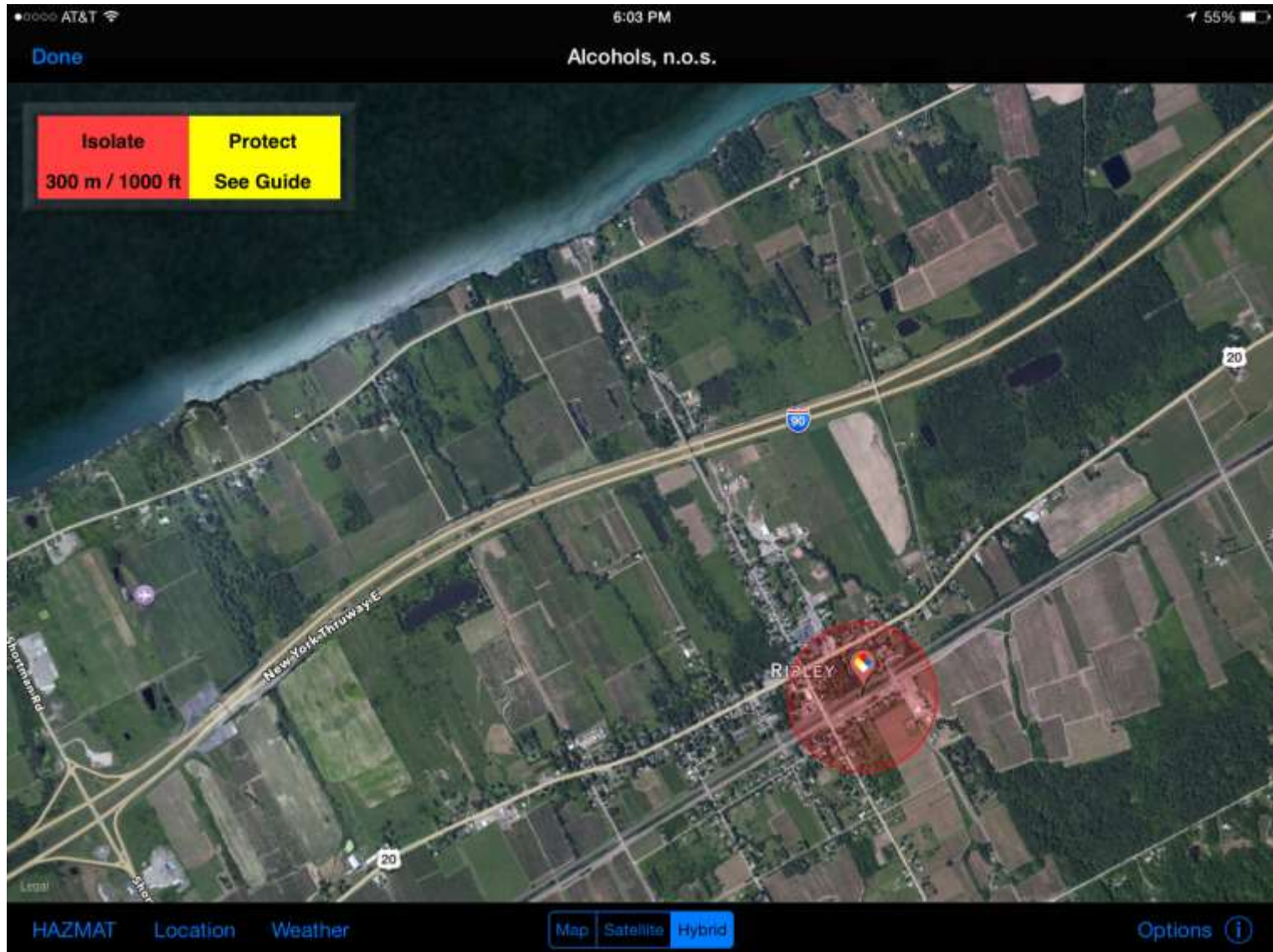


911 Call and Dispatch





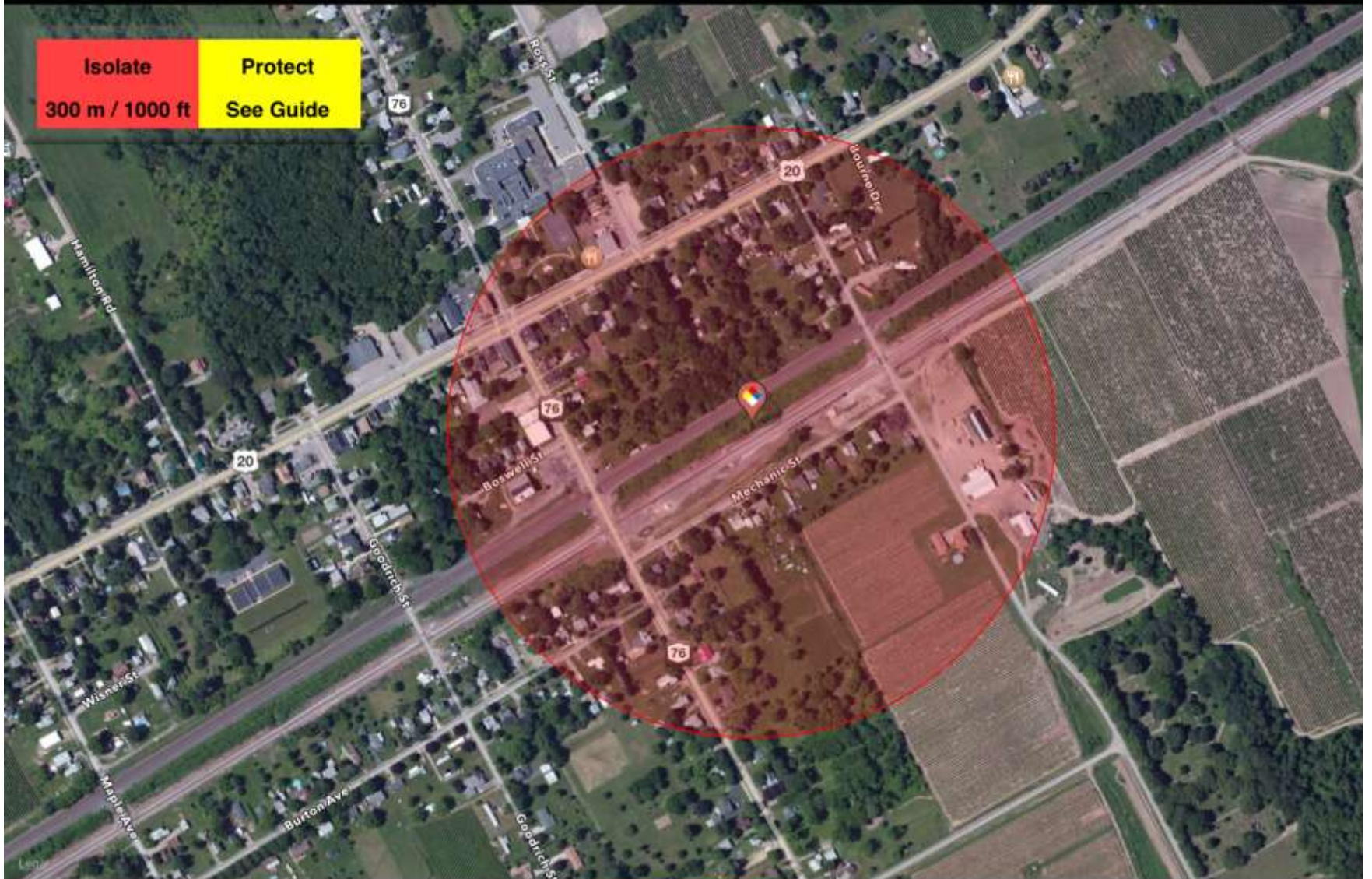
Fire Chief Ordered Evacuation



Done

Alcohols, n.o.s.

Isolate	Protect
300 m / 1000 ft	See Guide



HAZMAT

Location

Weather

Map

Satellite

Hybrid

Options ⓘ

Early Actions

- Numerous calls enroute
 - Director of Emergency Services
 - Hazmat Officers
 - OFPC
- Calls To both CSX and NS
 - Shut down both Lines
 - Request on-scene presence
 - Request Consist from NS
- DEC 800 Spill Line
- Set up Initial Command Post – Fire Hall
- Interview Train Crew – Make Copies of Consist
- Secure Perimeter
- Send NY Alert Message

Early Actions

- Review Evacuation Zone
 - Moved to 1000'
 - Set up HM Zones
 - Hot/Warm/Cold
- Send in Hazmat Crew
 - Recon – Facts
 - Air Monitoring
 - Defensive Actions
 - Boom Down Stream
 - Weather Update
- Appoint
 - Scribe
 - Accountability Group
 - PIO
- Determine Staging Areas
 - Responders
 - Contractors



Recon

- Confirmation
- Air Monitoring
- Scene Mapping
 - On Track
 - Off Track
- Review Hazmat Cars
 - Assess Condition
 - Liquid Ammonium Nitrate - on Track not Leaking
 - 2 Tankers – 1987 Alcohol (Ethanol) - Both Leaking
 - 1 Tanker – 1075 Propane – No Leak Detected
- Both NS and one CSX Track Fouled
- Investigate White Prills
- Location of Creek



Second Recon – with Rail Personnel – Once on Scene

- Included Contractor Supervisor
- Review Hazmat Cars
 - Document the Leaks
 - Propane Car Traveled 1,474 feet
- Condition of all Cars
- Secure Locomotive
- Status of Train Brakes
 - Set More Hand Brakes
- Review Where to Break Train



Unified Command



- Move to Mobile Command Vehicle
- Local Agencies
 - Ripley Fire
 - County Emergency Services
 - Hazmat
 - County Health
 - Sheriff
 - Town Supervisor
 - County Exec
- State, Federal, Others
 - OFPC
 - OEM
 - NYS Police
 - DEC
 - DOT
 - FRA
 - EPA
 - Coast Guard
 - CSX
 - NS
 - Contractors

Weather

- At Derailment
 - 42 Degrees
 - Heavy Rain
 - Wind 6 – 10 MPH
- By 5am
 - 24 Degrees
 - Snowing
 - Winds 28 – 32 MPH
- NWS - Buffalo

Spot Forecast for Ripley HAZMAT Fire National Weather Service Buffalo New York 1123 PM EST Tue Mar 1 2016

IF CONDITIONS BECOME UNREPRESENTATIVE,
CONTACT THE NATIONAL WEATHER SERVICE.
SPOT FORECAST FOR RIPLEY HAZMAT...CHAUTAUQUA CO EM
NATIONAL WEATHER SERVICE BUFFALO NY
1123 PM EST TUE MAR 1 2016

FORECAST IS BASED ON INCIDENT TIME OF 2315 EST ON MARCH 01.
IF CONDITIONS BECOME UNREPRESENTATIVE...CONTACT THE NATIONAL WEATHER
SERVICE.

.DISCUSSION...

A LOW PRESSURE SYSTEM WILL TRACK ALONG THE NEW YORK/PA BORDER TONIGHT
BEFORE QUICKLY SLIDING INTO NEW ENGLAND ON WEDNESDAY. THIS SYSTEM
WILL
BRING RAIN CHANGING TO SNOW SHOWERS OVERNIGHT WITH WINDS BECOMING
WEST-NORTHWEST 15-25 MPH WITH HIGHER GUSTS. MUCH COLDER WEATHER WILL
FOLLOW FOR TOMORROW INTO THE REMAINDER OF THE WORK WEEK.

.REST OF TONIGHT...

SKY/WEATHER.....CLOUDY (100 PERCENT). RAIN LATE IN THE
EVENING...THEN A CHANCE OF SNOW SHOWERS AFTER
MIDNIGHT. SNOW SHOWERS LIKELY LATE.
MIN TEMPERATURE.....AROUND 22.
MAX HUMIDITY.....88 PERCENT.
20 FOOT WIND.....WEST WINDS 22 TO 24 MPH WITH GUSTS UP TO 35
MPH.
MIXING HEIGHT.....MIN 1100 FT AGL.
TRANSPORT WINDS.....NORTHWEST 18 TO 26 MPH...INCREASING TO 28 TO 31
MPH AFTER MIDNIGHT.
SMOKE DISPERSION...MIN 26 (FAIR).

TIME (EST)	11P	MID	1AM	2AM	3AM	4AM	5AM
SKY (%)	100	100	100	100	100	100	100
WEATHER COV	DEF	DEF	CHC	CHC	CHC	CHC	LKY
WEATHER TYPE	RM	RM	SN	SN	SN	SN	SN
TSTM COV							
TEMP	41	37	34	29	27	24	24
RH	64	67	71	79	79	80	79
20 FT WIND DIR	SW	W	W	W	W	W	W
20 FT WIND SPD	22	23	24	24	24	24	24
20 FT WIND GUST	30	30	35	35	35	35	30
SMK DISPERSION	26	43	62	73	79	84	90

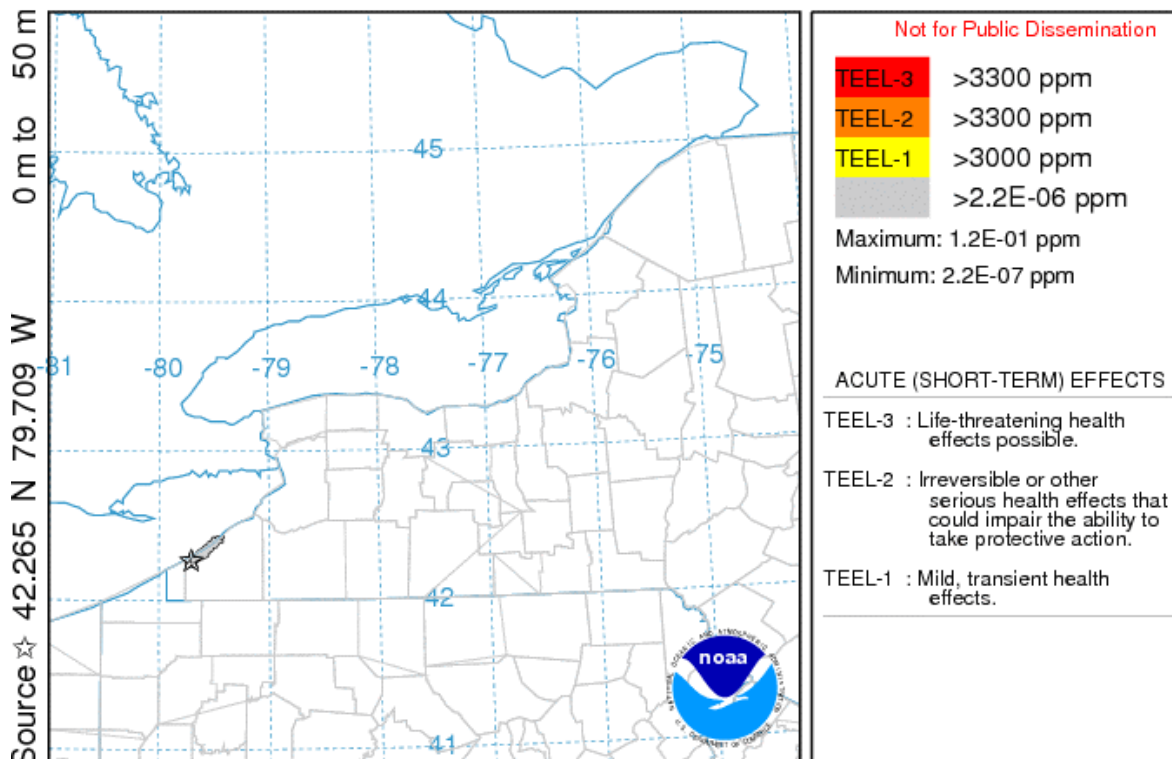
.WEDNESDAY...

SKY/WEATHER.....CLOUDY (95 PERCENT). SNOW SHOWERS LIKELY EARLY
IN THE MORNING...THEN A CHANCE OF SNOW SHOWERS
LATE IN THE MORNING. SNOW SHOWERS LIKELY LATE
IN THE MORNING.
MAX TEMPERATURE.....AROUND 24.
MIN HUMIDITY.....69 PERCENT.

NWS Plume Model

NOAA HYSPLIT MODEL

Concentration (ppm) averaged between 0 m and 100 m
Integrated from 0300 02 Mar to 0400 02 Mar 16 (UTC)
CHEM Release started at 0315 02 Mar 16 (UTC)



NAMS METEOROLOGICAL DATA

Job ID: 27020 Job Start: Wed Mar 2 04:16:01 UTC 2016
Release: lat.: 42.265000 lon.: -79.708889 Hgt: 0 to 50 m
Pollutant: (64-17-5) Ethanol
Release Quantity: 450000 g Start: 16 03 02 3 15 Duration: 1 hrs, 0 min
Output: Maximum 15-minute Average Air Concentration over 1 hour
Dry Deposition rate: 0 cm/s Wet Removal: None #Part: 5000
Initial TEEL-3: 3300 ppm TEEL-2: 3300 ppm TEEL-1: 3000 ppm
Meteorology: 0000Z 2 Mar 2016 - NAM NETile
Produced by user: shawn.smith





Operational Periods

- Started at 2 Hours
- Moved to 4 then 5 Hrs
- Plus as Needed
- Structured Briefing
- Ground Rules
- Agreement
- Map
- Plans for Period
- Jointly Brief Responders
 - Goals
 - Work
 - Safety
- IamResponding – Used to Fill Period Personnel Needs



Jointly Brief Responders



Foam Task Force

- Chautauqua County Unit
- Used Approx. 300 gallons
- Olean Trailer
 - Released Crew
 - Kept Trailer Until Tankers Cleaned and Purged
- Elmira Tender
- Hydrants only Supported One Trailer
- Tankers Staged for 2nd Trailer if Needed













Transfer Ops

- Ethanol First
- Then Propane
- Plan Reviewed by Group









Transfer & Flair Ops

- Ethanol First
- **Then Propane**
- Plan Reviewed by Group







Train Movement

- Initially all Train Movement Stopped
 - Both NS and CSX tracks Fouled
- Opened Tracks to Movement in Stages
- North CSX Track First
 - Train Required to Stop and Receive Permission from Command Post to Proceed
 - Train Movement announced Over All Radio Channels
 - Track Number and Direction
 - 10 MPH Speed Limit
- Restrictions Eased in Stages
 - Increased Speed to 25MPH
 - Not Required to Stop – Just Notify
 - Other Tracks Opened



Hot Work Permits

- Required Hot Work Permit
- Approved individually by Command Post
- Safety Briefing before Work Starts
- 5 Person Fire Crew
 - 2 – 20 Lbs. Extinguishers
 - Charged 1-3/4 Line
 - Foam Trailer Still Set Up and Ready
- Closed with Command when Work Complete





Resources

- 23 Fire Departments
 - NY and Pa. Departments
- 35 Pieces of Apparatus
- 105 Personnel
- Hazmat Team
- Medical – ALS Stand-by for Duration
 - Hazmat Team Initially (NYS ALS-FR Agency)
 - Commercial Service 2nd Day
 - One Patient
 - Non-incident Related – Seizure by Contractor

Evacuation and State of Emergency Declaration

- Town Supervisor Signed SOE Early Tuesday
- Evacuation Order Lifted 5 am Wednesday
 - 50 Homes – Approx. 100 people
 - First 10 Hours in Shelter
 - NS then Moved People to Hotels
 - Pets
 - Meds
- School Closed Tuesday
 - High School

Demob and Scene Transfer

- Accountability
- Return Safely
- Transfer to Railroad
 - Crossings
 - Overall Safety
 - Clean & Purged Certs
- DEC
 - Environmental

Environmental Treatment







TILX 190347

LD LMT	195500 LB	88700 KG
LT WT	67500 LB	30600 KG

CLEAN
AND
PURGED 3/4/16

Media

- Not Bad
- Fast
 - Fire Depart/Dispatch Phones Swamped
- Some Miss-information Initially
- PIO Appointed Quickly
 - CNN- Good Morning America – Etc.
- Set up Regular Briefings

Preparation and Training - Key

- Class B Flammable Class – 50 County Firefighters
- CBR Class Pueblo – Hazmat Coordinator – Fire Instructor
 - 100 FF Attended Local Class
- CSX Emergency Managers Training Atlanta - Hazmat Coordinator
- GRP – LEPC Meeting with 60 in attendance
 - Had just Received Draft

Preparation and Training - Key

- Foam Task Force
 - Trailer January 26th
 - Training February 9th
- Targeted Hazmat Grants – Foam – Air Monitoring Etc.
- SHSP Grant – Communication – Command 7 – HM Equip.
- HMEP Grant
 - Regional HM SOG
 - Crude by Rail Plan – Draft the Week Before
 - Commodity Flow Studies
- Monroe County Table Top January 25th

Critique





Questions



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