Greg Pashia, EPA R6 Tribal UST/LUST Program Coordinator

Addressing catastrophic release of diesel at the Laguna Pueblo Route 66 Travel Center, Laguna N.M.
Who are we?

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Heather
Our Regional Tribal Responsibilities

Oklahoma

36 Facilities
18 Tribes
New Mexico Pueblos

25 Tribal Trust Facilities

23 Facilities Non-Tribally Owned Within Tribal Boundaries

16 Tribes
Laguna Pueblo Route 66 Travel Center Contains 7 tanks. The 50,000 gal diesel tank piping failed.....
Tank Pit consisting of 5 diesel tanks (135,000 gallons) and 2 gas tanks (30,000 gallons)
On the Wind

Environmental Program News
By: Barbara Cywinska-Benacik

Route 66 Travel Center Catastrophic Diesel Release

Pueblo of Laguna’s Route 66 Travel Center

December 29, 2010 - At 11:00 P.M., the security visually observed and smelled fuel on the surface of the tank pad at Route 66 Travel Center. The system was turned off and State Police were called to secure the area. It has been determined by the third party monitoring company, that approximately 2,040 gallons of diesel fuel was released to the surface and subsurface soil. The POL Environmental Program was notified on December 31 and subsequently, notification was sent to EPA Region 6. Two companies, Kachina Petroleum and John Shomaker & Associates, were contracted by the LDC to start the emergency cleanup. The main line from the 50,000 gallon diesel tank disconnected at the elbow joint and caused the catastrophic release. The joint has been replaced; the line tested for tightness twice and passed the test results, so the Travel Center resumed its operations.

Since all distribution lines are single wall lines and the automatic leak detector did not function properly, the release was not noted for approximately 15 minutes. So far, the area along the tank pad had been excavated and excavation continues as release is being chased along the pipe. Contaminated soil and free product are removed and stockpiled in a secure location. The excavation work is very time and labor intensive because of natural gas lines, electrical lines, water lines and free product in the immediate area of the diesel line. The increased security measures are being fully observed. To date, the vertical and horizontal extent of contamination has not been defined.

The two main concerns are:
(1) Potential impact to groundwater, since the production wells are located down gradient of the spill and the water well pumps are pulling the product.
(2) Vapor intrusion to the small casino building.

To address these concerns, the contractor is monitoring groundwater in the two closest production wells and portable air monitors have been placed to monitor indoor air quality in the building. The LDC is in the process of compiling the Minimum Site Assessment/ Preliminary Site Investigation Report, as specified in RCRA Subpart F - Release Response and Corrective Action for UST Systems. The report is due to EPA this month. The formal TIER II Report and Corrective Action Plan (CAP) will be finalized later and the COP Summary will be published in the local newspaper.
Subpart F-Release Response & Corrective Action

40 CFR 280.60 Initial Response consisted of reporting the release, taking emergency action to contain the release.

Initial Abatement actions: 1. Contractors were immediately employed to excavate along the tank pit and piping run to the diesel dispenser area. Liquid diesel and contaminated soil were removed. A trench measuring approx. 3.5 feet depth and around 12 ft wide was excavated. Continuous sampling was conducted.
Initial abatement actions & site check continued

- Utility impact assessment
- Harmful Vapors investigated: Multiple readings were taken using PID equipment.
- Exposed Petroleum Product: The source of the release was located and emergency response to capture as much as practicable was implemented within 72 hours.
Initial abatement of free phase
Piping run to diesel dispensers
Soil staining
280.62(b) 20 day report
LDC provided 72 hr & 14 day reports
280.63 Initial Site Characterization to be reported within 45 days
Site Characterization

- Nature and estimated quantity of release
- Data from available sources concerning: surrounding population, water quality, use and approximate location of well potentially affected, subsurface soil conditions, location of utilities, climate & land use..
Site Characterization continued

- A total of 6 ground water wells were located within 1000 feet of the release site.
- Two major drinking water wells were located at about 175 feet and 425 feet from the release.
- An intermittent stream, the Rio Puerco, is located about 2500 feet from the release site.
- By February 11, 2011 the two nearest water wells were analyzed and found to be free of contamination.
3 Ground water sentinel wells were drilled and developed. 4 quarters of sampling of these well is required.
Decontaminating drill pipe
Monitoring well #2

- 102.53' bgl water level 2/8/2012
- 4.5'' OD PVC, sched. 40 screen, 0.020'' slot, with end cap
- 4.5'' OD schd. 40 PVC blank casing, flush-threaded joint
- cement—bentonite grout
- heavy-duty manway flush-grade completion locking cap
- 1/4'' to 3/8'' gravel
- bentonite seal
- filter pack (10–20 gradation silica sand)

- silt clay and clayey silt
- sand and clayey sand
- silt clay interbedded with clayey sand (beds are approx. 5 ft thick)
- fine sand

NOT TO SCALE
All potential areas were investigated.

Figure 1. Aerial photograph showing excavated areas and monitoring wells, Route 66 Travel Center diesel spill, Laguna Development Corporation.
Prevention measures installed

- New double walled fiberglass piping installed
- Electronic sump sensors installed that disable turbine pumps if fluid detected in pump sumps or dispenser sumps.
Corrective action was accomplished during the site investigation and site characterization.

No further action was determined in May 2012.

LDC continues to sample the groundwater sentinel wells each quarter.
Compliance Assistance Strategy

Over the last ten years (2002-2012) the Region 6 Tribal UST staff have visited each tribal facility and provided the owner/operator with an evaluation of compliance with the Federal UST regulations.

Identification of more stringent regulations that each state may have has also been pointed out to the tribes.

An effort was made to involve the tribal Government, tribal Economic Development organization, and UST Management in a meeting with EPA staff. A presentation of what the UST program is all about was given to this group. A question was put to the tribal government representative as to who, within the tribe, would be the main contact between the tribe and EPA UST staff.
Contact with the appointed tribal UST contact has resulted in a higher compliance rate. The measured rate of compliance in 2002 was just 10%. Now, the estimated compliance rate has risen to 82%. It is being projected that after this coming FY (2013) inspections of tribal facilities, (all tribal facilities are now on a 3 year inspection cycle), the compliance rate will be maintained or slightly increased.

Tribal Staff are also working with R6 tribes, during 2013, that are in the planning stages of opening new UST facilities or acquiring facilities from other sources that are already operating. Presentations have been given to two tribes in NM concerning installing a new UST system that would be protective of the environment and protect the tribes assets by preventing releases.
R6 Tribal UST program is currently working with the Inter-Tribal Environmental Council (ITEC), and the Eight Northern Indian Pueblos Council Office of Environmental and Technical Assistance (OETA) through grants, to develop two UST evaluation tools.

The “VOC tool” is a field analysis tool used to determine the TPH of a soil or water sample taken from a contaminated Site boring or water sample. The tool is being developed to provide the tribes with a low cost, low maintenance, and easily utilized tool that will help in making field decision on which samples contain a quantitative amount of TPH, thereby helping to reduce the number of samples sent in for laboratory analysis for determining the extent of contamination.
The “GIS Tool”, or Cumulative Risk for Underground Storage Tanks (CRUST), uses GIS to evaluate the vulnerability and environmental impact of a UST system. Using GPS data, census data and other publicly obtainable GIS databases, UST systems are evaluated on a 1 to 5 bases. A ranking of 1 is low vulnerability while a 5 indicates the location of the UST system that presents a high threat to the environment. A data set evaluating the specific configuration of the UST system being examined is incorporated into the GIS analysis. For instance old steel tanks that have failed a corrosion protection evaluation would be ranked a 5.

The goal is for ITEC & OETA to rank all tribal UST facilities within Region 6. This has been accomplished and any new facilities will be added as they are built and put into operation.
Contact information

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