



Solid Waste News & Notes

A Newsletter from the Solid Waste Unit of the Hazardous Materials and Waste Management Division

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Solid Waste Unit Helps Stapleton Take Off Again

Stapleton airport, owned and operated by the City and County of Denver, grew from a dirt runway out in the country in 1929 to the nation's sixth busiest airport when it closed in 1995. From an original 640 acres, it now sprawls over 4700 acres. With the opening of Denver International Airport, Stapleton was condemned never again to be an airport. Consequently, it is now the largest urban renewal and development project in the United States!

Formal planning for the future of Stapleton started in 1989, and, in 1991, a general development plan was adopted as part of the City and County of Denver Comprehensive Plan. After additional input from citizens, volunteer groups, corporate leaders and Denver administration officials, the final design for redevelopment was formulated in 1995. The development of Stapleton will incorporate residential, commercial, educational and recreational areas, and it will take almost three decades to complete. Residential areas will accommodate more than 12,000 homes and will be styled after the attractive, older neighborhoods in Denver. More than 35,000 workers will fill the commercial and office spaces, and Denver's extensive park system will be enlarged by 1,100 acres.

Some of the commercial developments already are apparent on the north side of I-70. Waste Management and Catellus Development Corporation signs can be seen from the highway. The large stockpiles are crushed

concrete being processed by Recycled Materials, Inc., part of over six million tons of concrete from runways to be recycled. Many thousands of tons of other materials from the former airport buildings, pipelines, paving and structures will also be recycled. Also, several large buildings at the south end of the airport, near Montview Boulevard, already are occupied by local businesses.

The control tower and parking garage remain in the terminal area, and that's about all one sees now of the former airport. The parking area is used as an RTD Park-N-Ride and bus station, including the Skyride to maintain an airport connection to DIA! The large, sprawling terminal building, numerous hangars, miles of jet fuel pipelines and utilities, more than 1,000 acres of concrete runways and taxiways- 1½ to 4 feet thick, several hundred storage tanks and many other structures and buildings made demolition and clearing the site a major undertaking in itself.

Planning for the environmental cleanup started long before the demolition began to remove these obstructions to remediation. Denver decided early on that the property would be cleaned up to allow unrestricted residential use over the entire area. Remediation goals protective of human health in the residential setting were established.



Colorado Department
of Public Health
and Environment

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Compliance Assistance from the Unit Leader

A Fond Farewell!

The Solid Waste Unit recently bid a fond good-bye to Pete Laux as he entered a new stage of his life: retirement. Pete worked for us for eight years, having brought with him a wealth of experience in the petroleum and petrochemical industries. During the time that Pete worked with us, he set an example of dedication, professionalism and customer service that has served as a model for us all. He will be missed by those of us in the Division as well as those of you who were his customers.

Pete takes his inquisitive nature and positive attitude with him into this new world of retirement. His first project is not fishing or the rocking chair, but as a visiting scientist at an archeological dig in Texas. He did not even rest the first weekend! So while his many talents will be missed here, they will be put to good use elsewhere.

Best of fortune in your future Pete!

Welcome Virginia!

The Solid Waste Unit now has a new employee, Virginia Duffy, to take over those counties and projects formerly handled by Pete Laux. Virginia comes to us from the Illinois Environmental Protection Agency (state, not federal). She began her career here in early February. We all look forward to working with Virginia for many years to come.

She will be handling projects in Adams, Arapahoe, Denver, Douglas and Larimer Counties. If you wish to contact Virginia, her telephone number is 303-692-3409, and her e-mail is Virginia.Duffy@state.co.us.

CGlenn Mallory, Solid Waste Unit Leader, (303) 692-3445

E-mail: Glenn.Mallory@state.co.us

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Due to the short time scheduled, excavation and removal is the logical method of remediation.

It should not be a surprise that the predominant contaminant is jet fuel, large amounts of jet fuel. Other contaminants are motor fuels, de-icing liquids and minor amounts of commercial chemicals, mainly solvents. The fuels were stored in a variety of underground and above-ground storage tanks with capacities up to 1.2 million gallons. An extensive pipeline system connected two major jet fuel tank farms with hydrants at several fueling areas and terminal gates. Jet fuel leaked from numerous tanks,

concern are mainly petroleum products, that do not fall under hazardous waste regulation, the Solid Waste Unit has taken the lead for the Department and the Hazardous Materials Division in overseeing the cleanup on Stapleton.

Two other Division units are also involved at Stapleton. Several areas of concern have been addressed through our Voluntary Cleanup Program. Examples are the 300-acre Stapleton Business Center, north of I-70, and the areas affected by encroachment of ground water contaminant plumes from other properties. One plume of concern is solvent from the former Lowry Air Force Base. The Division's Federal Facilities Program is the implementing



pipelines and hydrants. Over the years, ground water carried some large fuel releases significant distances from the leak points.

Review and approval of the cleanup falls under the purview of two state agencies: the Oil Inspection Section (OIS) of the Department of Labor and Employment, for releases from regulated storage tanks (the State Resource, Conservation and Recovery Act, "RCRA"-I program), and the Colorado Department of Public Health and Environment, for other releases (RCRA-C, RCRA-D, Clean Water Act programs). Within the Department, the Hazardous Materials and Waste Management Division is the implementing agency. Because the contaminants of

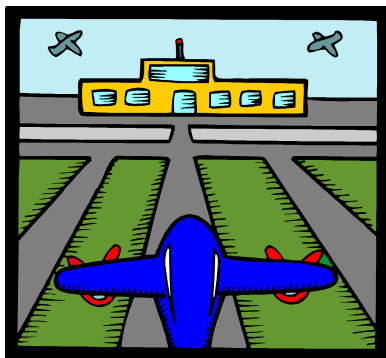
agency for oversight of the investigations currently underway to determine the extent, indoor air impacts and possible corrective actions that may be required to remediate the Air Force's release. As an added precaution, Denver and the Department have taken steps to assure public health protection at Stapleton. For example, future owners and occupants will not be allowed to access or use ground water at the site. Besides, city water will be available.

Denver is closely coordinating clean-up efforts with the regulatory agencies. For each project area, the agencies review, comment on and approve several rounds of reports

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prepared by their primary environmental contractor: Parsons Engineering Science. A pre-characterization report presents a summary of previous investigations and detailed plans for additional assessment actions to adequately define the nature and extent of contamination. After additional data are acquired, usually entailing dozens of new borings and samples, a Corrective Action Plan is drawn up. Upon completion of the remedial work, a Corrective Action Plan



Implementation Report is provided. Recently, the first *No Further Action Determination* has been approved for the 100-acre Regional Retail Center project area. The cleanup entailed removal of 87,000 cubic yards of contaminated soil, all of which were taken to the Denver-Arapahoe

Disposal Site landfill. It is anticipated that three other areas of this size will have to be remediated in a similar fashion.

Lately there has been a lot of media coverage about the redevelopment of the former Stapleton International Airport. On March 1, Mayor Wellington Webb announced the signing of the anchor stores for a Regional Retail Center to be built at Quebec Street and Smith Road in the northwest corner of the former terminal area of the airport property. After transfer of the parcel to the developer,

Forest City Stapleton, Inc., construction will begin this spring for Home Depot, Sam's Club and Super Wal-Mart stores. Numerous smaller stores will follow. This retail area serving Northeast Denver will be named Quebec Square, and it will be about half the size of Park Meadows. Concurrently, some 1,200 homes will be built in the first residential area located just south of the former terminal area. And this is just the beginning!

Our involvement with the Stapleton cleanup shows that the role of the Solid Waste Unit extends well beyond landfills and trash transfer stations. We are active in overseeing remediation of many sites with petroleum contamination, as well



as other non-hazardous spills and releases. The Stapleton project is our largest, and we are proud to play an integral role in the urban redevelopment underway in Denver.

*CPete Laux, Solid Waste Unit, Emeritus
(Pete retired on March 30, 2001)*

Note: The Stapleton Development Plan, also known as The Green Book, can be purchased for \$25 from Forest City Stapleton, Inc., 303-382-1800 or at <www.stapletondenver.com>.

Captive Recycling

Minimum-security inmates at the Federal Correctional Complex in Florence, Colorado, are constructing an open-air training building on the penitentiary grounds with baled scrap tires. The utilization of tire bales as building block material has many potential applications and helps to keep scrap tires out of the general waste stream. At the Florence complex, the tire building will be 60 foot by 60 foot with 10-foot high walls. The west and south sides of the structure will be built into a partially excavated earthen mound, which will allow for viewing into the roofless structure during training exercises.

The tire bales used for this project were manufactured by Midway Tire Disposal and Recycling in Fountain, Colorado. Midway is actively participating in a research program with the Colorado School of Mines to explore various civil engineering applications for baled tires.

Officials with the Federal Correctional Complex wrote to the Solid Waste Unit outlining their design plans and asked if the intended use presented any environmental concerns. The Unit was pleased to respond that tire building

blocks, used in this manner, should not present environmental issues, and that the State of Colorado encourages the use of scrap tires in innovative projects such as this one.

CGeorge Carnes, Newsletter Editor, (303) 692-3329

E-mail: George.Carnes@state.co.us

