City of Austin - Goodwin Site Brownfield Revitalization Project

Guadalupe – Saldaña Net Zero Subdivision

Alliance of Hazardous Materials Professionals National Conference

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Overview

- Introduction
- Brownfields Primer
- COA Program Successes
- Goodwin-Webberville Site
  - Investigation/Assessment
  - Remediation
- Guadalupe – Saldaña Subdivision

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Definitions

- ***Brownfields*** are property affected by real or perceived contamination that inhibits its reuse.
- ***Land revitalization*** is the process of assessing a property for contamination, cleaning up contamination (if found), and returning the property to be reused.

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Where are Contaminants?

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Jan 2002 – US President signed the Small Business Liability Relief and **Brownfields Revitalization Act**

- **Amends CERCLA** by:
- Providing grants to assess and cleanup sites
- Providing liability exemptions
- **Defines brownfields** as:
- "…real property where the expansion, redevelopment or reuse is complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant."

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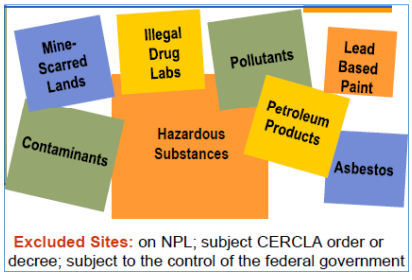
Eligible Contaminants



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The Brownfields Impact

Economic
Decreased property values and city tax revenues

Social
Increased urban sprawl and inner city blight

Environment
Potential threats to human health and the environment

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Turning Point

- 1997, Austin city manager notifies Mayor & Council of establishment of B-flds @ SWSD.
- In 1998, Austin established a Remediation Fund to address and reuse city owned brownfield properties.
- In 1998, Austin applies and is awarded a US EPA Pilot Brownfields Assessment Grant. To date, the city has been awarded B-flds grants totaling $1,050,000 to assist 51 b-fld. Properties.
- ***Austin Brownfields Land Revitalization Office*** is the ONLY city program that seeks out brownfield properties to return to productive use.

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Brownfields Mission & Vision

- ***Mission*** – Contribute to Zero Waste by providing incentives to property owners so they can revitalize land.
- ***Vision*** – Encourage and facilitate responsible land revitalization in order to create sustainable communities, limit urban sprawl and conserve green space.

"For every 1 acre of Brownfields reused saves 4.5 acres of greenspace"

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Brownfields Objectives

- Encourage sustainable revitalization
- Accelerate b-flds. revitalization
- Leverage resources
- Expand opportunities and exposure

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ARR + Brownfields = Clean Communities

- The City's Organizational Climate
- Environment & Economic
- Time & Money
- Natural Fit

"Why Waste lots, Recycle a Lot!"

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Federal Resources Leveraged TBA

- Provides expert technical guidance and support for local B-flds.
- Provides ESA Phase I & II & Cleanup Planning TBA (Requests Accepted Year- Round; Est. TBAs - 2011 2,200)– COA has had several
- Contacts ABLRO for participation in National initiatives. (Invites Made Year-Round)

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State Resources Leveraged BSA

- Provides State Environmental Liability Protection
- Provides expert technical guidance and refers Bfld. Property owners to ABLRO
- Provides ESA Phase I & II, Vapor/Water/Soil Assessment & Cleanup Planning
  (Requests Accepted Year-Round Est. BSAs – 2011 1,800 – COA has had several.)
- Key Partner with US EPA R-6 & COA
- Technical Decision Makers

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Benefits of the BSA

- Site Assessment for Eligible Entities at No Cost
- Waived VCP & IOP Fees for Non-Profits & Government Entities
- Services for EPA Grantees in Texas:
  - Guidance & Technical Assistance to Subtitle A Grant Sites
  - Petroleum Eligibility Determination Letters
  - Support Letters for Potential Grant Recipients

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Brownfields Site Assessments (BSAs)

http://www.tceq.state.tx.us/remediation/bsa/bsa.html

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Brownfields Funding Sources

- Grants Awarded
  - 1998 Pilot Assessment $200,000
  - 1999 Supplement Pilot $150,000
  - 2000 BCRLF Cleanup $500,000
  - 2005 UST $200,000
- Resources Leveraged
  - 2010 ABLRO TBA & BSA $126,629
  - 2011 ABLRO TBA & BSA $181,435
  - 2012 ABLRO TBA $ 84,927

TOTAL $1,442,991

* Each $1 invested in B-flds. funding leverages $2.50 in redevelopment!

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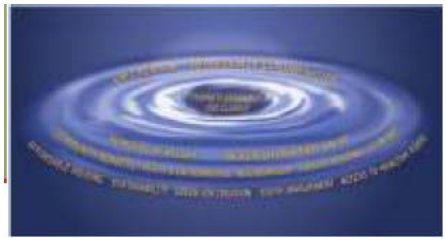
Community Benefits of Brownfield Revitalization:

A Ripple Effect



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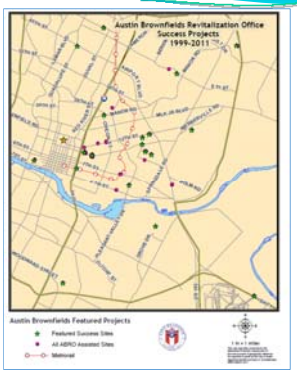

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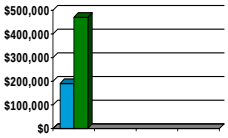
Brownfields Success Stories

2715 E. 5TH STOP-N-TOTE & MIXED USE

RECYCLED LAND TAX VALUES



BEFORE AFTER

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1900 Manor Rd. Top Hat Burgers

RECYCLED LAND TAX VALUES

BEFORE AFTER

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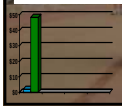
3rd. & Lamar Blvd.

Gables Plaza

$1.8 - $48.3 millions



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900 Block E. 11th St.

African-American Heritage and Cultural Facility

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2511 E HWY 71 - FOR SALE

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408 Kemp St.

Environmental Justice Education Park

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IH 35 & 4th St.

Plaza Saltillo & Rail Road Re-alignment




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E. 4th St. - Plaza Saltillo TOD & Nearby Development



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3427 Parker Ln.

Mabel Davis Skateboard Park



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2606 Sol Wilson Ave.

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2711 Goodwin

Guadalupe-Saldana Affordable Housing Corp


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Conceptual rendering in the neighborhood

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Plans for redevelopment

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Stakeholders & Partners

- City of Austin
- Guadalupe-Saldana Development Corporation
- Austin Energy
- Community & Neighborhood
- Jones-Carter: Civil Engineer
- Holt Engineering: Geotechnical Engineer
- CB&I (formerly The Shaw Group): Environmental
- Architects
  - Hatch + Ulland Owen
  - KRDB
  - Nelsen Partners
  - Studio Momentum
- Landscape Architect: RVI
- LBJ Wildflower Center
- Raymond Chan and Associates

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G103 Community Involvement

Neighborhood Meetings:

- 2007 to 2010 there were:
  - Neighborhood Planning Team
  - 2 Meetings at Santa Julia
  - Neighborhood Charrette at Lyons Gardens
  - Public Notice for Site Plan Approval process

What the Community said they wanted:

- Affordable Housing
- Both home ownership & rental properties
- Net-Zero Energy

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Program

- 100% Affordable Homes
- ~90 Homes
  - Single-family
  - Two-family
  - Townhome
- 65% Home Ownership
- 35% Rental
- Net-zero Energy

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Net-Zero Energy Homes

- Annual Energy Consumption is Zero
- Energy Efficiency
  - Insulation
  - Lighting
  - Heating and Cooling
- Renewable Energy
  - Solar Electric System
  - Solar Thermal System (Hot Water)

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Financing and Grants

- Pre-development/Infrastructure
  - Kresge Foundation- $100,000
  - Enterprise Community Partners $105,000 + $25,000 (loan)
  - Austin Energy - $750,000 (photovoltaic arrays)
  - Austin Brownfields Redevelopment Office $132,000
  - City of Austin General Obligation Bonds - $1,665,000
  - HUD Community Development Block Grant - $1,500,000
- Housing
  - Financing through Austin Housing Finance Corporation and TX Community Affairs Neighborhood Stabilization Program

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BSA G103 Goodwin-Webberville

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Phase I ESA January 2007

- Site - 2711 Goodwin Avenue and 3501 Webberville Road, Austin, Travis County, Texas 78702
- User of Phase I- City of Austin ABRO, TCEQ, and EPA
- Reason for Phase I - Identification of Recognized Environmental Conditions and to ensure liability protection for qualified landowners.

History of Site:-
- At least 1951: Property was undeveloped land
- Approximately 1955 – 1964: Actual timeframe unknown; Property was used for dumping waste and debris from the construction of Interstate 35.
- 1964 - Current : Property is undeveloped land with potential un-registered dumping.

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Phase I ESA January 2007

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Phase I ESA January 2007

Conclusions
- The Property was an un-registered abandoned landfill.
- Methane gas is being monitored at the ACC Campus. The presence of methane gas adjacent to the Property, from the same landfill, represented a REC.
- The unknown amount and material used in the un-registered dumping represented a REC.

Recommendations for Additional Investigation
- A Phase II ESA to assess the presence of contaminants of concern.
- The subsurface investigation should assess possible methane gas concentrations.
- The subsurface investigation should also evaluate the environmental condition and stability of the subsurface prior to the construction of any structures.
- Collection and analyzes of surface water samples from the drainage channel.

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Limited Phase II ESA February 2008

Project Objectives

- Identify and estimate the volume of surface waste and debris dumped at the site that will require proper off-site disposal;
- Assess the presence and extent of subsurface waste materials and estimated the volume of material on the subject site;
- Characterize the subsurface waste material and classify the material for disposal;
- Determine lead impacts to surface soil associated with an automobile battery dump area reportedly located at the site; and
- Identify and determine the concentration of petroleum hydrocarbons at stained or unvegetative areas, if present at the site.

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Limited Phase II ESA February 2008

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Investigative Trenching and Waste Characterization

- Investigative subsurface excavations were completed across the site to assess the extent and character of subsurface waste materials on the subject site.
- Once utilities were cleared, 20 "pothole" excavations were completed utilizing a track mounted excavator. The subsurface excavations were completed to depths ranging from 6 to 10 ft below ground surface (bgs).
- During excavation activities, a photoionization detector (PID), calibrated for methane, was used to monitor the concentration of total organic vapors. Explosive concentrations were monitored using a combustible gas indicator (CGI). No readings indicating unsafe levels were recorded and work proceeded as planned.
- Six (6) waste characterization samples were submitted to an analytical laboratory for chemical analyses.

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Target Constituents of Concern

Additional Soil Samples

- Two (2) surface soil samples from the automobile battery dump area were collected and sampled for or chemical analysis.
- In addition, three (3) surface soil samples were collected from suspect areas that were observed during the site reconnaissance.

The target COCs for waste characterization included:

- Volatile and semivolatile organic compounds;
- Total petroleum hydrocarbons (TPH)
- Organochlorine pesticides and polychlorinated biphenyls (PCBs); and
- Toxicity Characteristic Leaching Procedure (TCLP) RCRA 8 metals.
- The COC for the automobile battery dump area is total lead and TPH for the stained or unvegetative areas.

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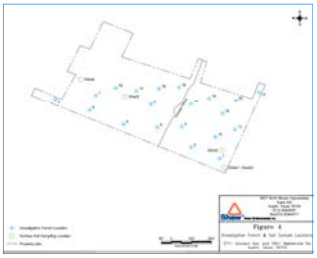
Limited Phase II ESA February 2008



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Limited Phase II ESA February 2008 - Conclusion

- Waste debris was scattered across much of the site. Investigative subsurface excavations completed at the site indicated that concrete and other construction related debris was limited to a depth of 1 to 1.5 ft bgs or less.
- Analytical results for trench samples collected for waste characterization analyses indicate that detected chemical concentration were below both the EPA hazardous and Texas Class 1 nonhazardous regulatory limits.
- Total lead was detected in the two (2) soil samples collected from the automobile battery dump area at concentrations above the TRRP Tier 1 Residential $^{GW}Soil_{Ing}$ PCL one was above the $^{Tot}Soil_{Comb}$ PCL.

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Limited Site Assessment of Adjacent Track, December 2008

- Limited Site Assessment of adjacent 4-acre tract
- 2 Trenches/test pits completed
- 2 Soil samples collected and analyzed for Lead
- Soil not impacted by lead

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Groundwater Monitoring through TCEQ-BSA April, 2009

- Groundwater monitoring wells installed in the vicinity of site
- Groundwater samples collected and analyzed for Lead
- Groundwater not impacted by lead

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Delineation of Lead Impacted Soil 2011

Field Activities

To delineate the extent of lead impacted soil horizontally and vertically, soil samples were collected and analyzed for lead from three (3) impacted areas (Area A, B, and C). SPLP test was also performed on the deepest sample to determine the mobility of lead and its leaching properties to groundwater. The analytical results were compared to TRRP Tier 2 residential $^{GW}Soil_{Ing}$ PCL of 549.07 mg/kg was calculated for lead utilizing site-specific pH.

Each perimeter sample location consisted of two (2) soil samples that were sampled at the ground surface and six (6) inches below ground surface. Each centerline sample location consisted of four (4) soil samples that were sampled at depths of one (1), two (2), three (3), and four (4) feet below ground surface.

- A total of 79 soil samples were submitted for total lead analysis utilizing Method SW6020A;
- Three (3) soil samples were submitted for SPLP utilizing Method SW 1312/6020;
- One (1) soil sample was submitted for Toxicity Characteristic Leaching Procedure (TCLP) utilizing EPA Method 1311.

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Delineation of Lead Impacted Soil July 2011

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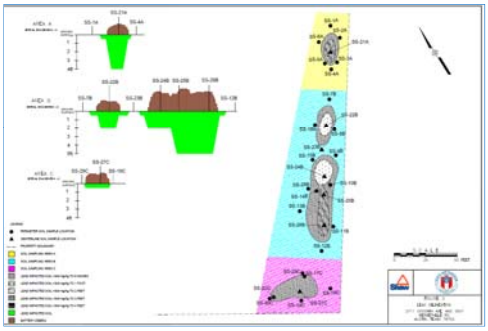
Delineation of Lead Impacted Soil July 2011



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Delineation of Lead Impacted Soil 2011

Results

The laboratory analytical results indicate that lead impacted soils were delineated to a depth of:

- 4 feet in Area A,
- 5 feet in Area B,
- 6 inches in Area C.

Delineation results indicate that lead impacted soils above the calculated Tier 2 GWSoilIng PCL of 549.07mg/kg lead to be removed include:

- 450 square feet area with an ~ volume of 26 cubic yards within Area A;
- 2,200 square feet area with an ~ volume of 350 cubic yards in Area B;
- 650 square feet area with an ~volume of 14 cubic yards in Area C

The volume of battery debris observed at the surface for each area is estimated as:

- ~10 cubic yards of battery debris is located within Area A;
- ~ 36 cubic yards of battery debris within Area B; and
- ~ 4.5 cubic yards of battery debris within Area C.

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Excavation October 2011

- The battery casings and impacted soils were excavated and removed.
- Lead impacted soil was removed and disposed of appropriately based on Limited Phase II conducted at the Site.
- Over excavation had to be completed due to visible scattered battery casings at the site.

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USEPA Confirmation Sampling November 2011

USEPA employed Baer Engineering to conduct confirmation sampling at the site.

Confirmation sample results from Area A were below $^{Tot}Soil_{Comb}$ of 500 mg/kg and delineation of impacted soils was considered complete. Confirmation sample results from Areas B and C still exhibited elevated lead concentrations above 500 mg/kg, requiring additional lead delineation in soil.

Prior to collecting additional delineation soil samples additional soil was excavated and removed

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USEPA Confirmation Sampling November 2011

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Additional Delineation of Lead Impacted Soil (Area B and C) March, 2012

- Soil samples from Areas B and C lead impacted areas were analyzed utilizing X-Ray Fluorescence (XRF) technology
- Horizontal and vertical delineation of lead impacted soil was determined by collecting wall and ground surface samples 6 inches below ground
- For quality assurance and quality control purposes a set of soil samples analyzed using the XRF technology were split and submitted to Laboratory to check accuracy of the results

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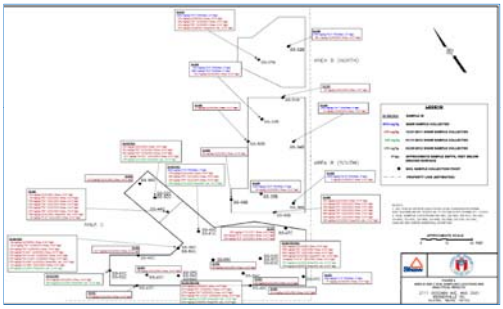
Additional Delineation of Lead Impacted Soil (Area B and C) March, 2012



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Additional Delineation of Lead Impacted Soil (Area B and C) March, 2012

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Additional Delineation of Lead Impacted Soil (Area B and C) March, 2012

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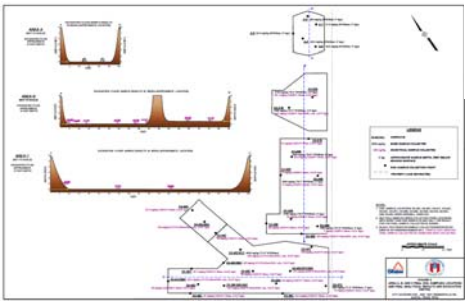
Additional Delineation of Lead Impacted Soil (Area B and C) March, 2012



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Additional Delineation of Lead Impacted Soil (Area B and C) March 2012 and Excavation April 2012

- The XRF field data and laboratory analytical results indicate that lead impacted soils were delineated to an additional depth of six (6) inches within Areas B and to an additional depth of 1.5 feet in Area C.
- Analytical results also indicate that lead impacted soils were horizontally and vertically delineated below the site specific calculated TRRP $^{Total}Soil_{Comb}$ of 500mg/kg in Areas B and C.
- Area A was horizontally and vertically delineated during the June, 2011, ESA activities.
- A total of 660.11 tons of lead impacted soil was removed and transported for disposal as indicated in the report entitled Webberville Road & Goodwin Avenue Lead Soil Remediation Report April 2012, SWS Environmental Services.

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No Further Action received from TCEQ

- A No further Action was received form the TCEQ November 2012

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GUADALUPE-SALDANA NET-ZERO SUBDIVISION SITE PLAN

Plans for redevelopment

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Increase in Property Value

- Vacant, Contaminated, unsubdivided no infrastructure = 525,000-1.2M
- Projected Value = 4.0M-7.0M
- Vacant Land Increased Value = 2.8M-6.475M
- Built-out Increased Value = 17.65M-21.325M (135K x 110 units)

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City of Austin - Goodwin Site Brownfield Revitalization Project

Guadalupe – Saldanã Net Zero

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