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Proposed Remedial Action Document

for

Tricon America, Inc.

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January 6, 2000

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PROPOSED REMEDIAL ACTION DOCUMENT

TRICON AMERICA INC.
STATE SUPERFUND SITE
CROWLEY, TARRANT COUNTY, TEXAS

January 6, 2000

TNRCC

PREPARED BY:
TEXAS NATURAL RESOURCE CONSERVATION COMMISSION
SUPERFUND CLEANUP SECTION
REMEDIATION DIVISION

TRICON AMERICA, INC.
CROWLEY, TARRANT COUNTY, TEXAS
PROPOSED REMEDIAL ACTION DOCUMENT

INTRODUCTION

The Tricon America Inc. State Superfund site (Tricon site) is located at 101 East Hampton Road within the city limits of Crowley, Tarrant County, Texas (Figure1). The site is bordered by a partially wooded field and Deer Creek to the north, railroad tracks to the west, and Hampton Road to the south. The east side of the site is bordered by the residences on McCurdy Street, and a maintenance yard owned by the City of Crowley.

The Tricon site has been divided into two sections: (1) Tricon Facility consisting of two-thirds of the entire site from entrance gate at the East Hampton Road to the north end of the concrete slabs; and (2) Triloc Cap Area comprising of the waste ash materials contained under the Triloc Cap and the uncapped portion south of the cap.

The Tricon site was divided to allow the Tricon facility area to be remediated and potentially returned to service on an accelerated schedule. The Tricon facility was remediated by excavating a few small areas of contaminated soil and moving the excavated soils to the Triloc Cap Area. The excavated soil will be addressed along with the Triloc Cap Area during final remediation. A fence was installed to separate the Tricon Facility from the Triloc Cap Area.

I. STATEMENT OF BASIS AND PURPOSE

This **Proposed Remedial Action Document (PRAD)** presents the proposed **Remedial Action**, which is designed to insure the protection of public health and safety and the environment at the Tricon site. The selection of the proposed Remedial Action was made in accordance with the **Texas Solid Waste Disposal Act**, codified as the Texas Health and Safety Code, Chapter 361, and all applicable State and Federal environmental regulations. Words appearing in boldface in this document are defined in Section X, Glossary.

The purposes of this document are:

1) to describe the actions taken by the **Texas Natural Resource Conservation Commission (TNRCC)** to investigate and mitigate the contamination;

2) to solicit public review and comment on the actions taken and decisions made by the TNRCC with regard to the proposed Remedial Action; and

3) to provide information on how the public can comment on the actions taken by the TNRCC with regard to the proposed Remedial Action.

This PRAD summarizes information that can be found in greater detail in various studies and reports located in the site files. Relevant documents that are summarized in this PRAD include:

1) the **Hazard Ranking System** document which consists of the preliminary evaluation (ranking) that qualified the site for listing on the State Registry and allowed funds to be used to investigate and remediate the site under the State Superfund program;

2) the **Remedial Investigation** Report which contains the Technical Report from the State's consultant, which has the results of the sampling and analyses data collected during the remedial investigations at the site.

3) the **Baseline Risk Assessment** Report, which assesses the potential human health and ecological risks posed by contamination at the site;

4) the Focused **Feasibility Study** which describes and evaluates the alternatives for the Remedial Action; and

5) the Supplementary Focused Feasibility Study which was conducted to develop and evaluate two additional remedial action alternatives to the Focused Feasibility Study to address the new information obtained from the geotechnical study at the site.

The TNRCC encourages the public to review these documents in order to gain a better understanding of the Tricon site, the State Superfund process, and the actions taken by the TNRCC. Copies of the documents summarized in this PRAD, as well as other relevant information, can be found in Crowley at the:

Crowley Public Library
121 N. Hampton Road
Crowley, Texas 76036

or in Austin at:

TNRCC
Building D, Room 190
12100 Park 35 Circle
Austin, Texas 78753

II. SITE LOCATION

The Tricon site, as shown in Figure 1, is an abandoned industrial site located at 101 East Hampton Road, Crowley, Tarrant County, Texas. The site occupies approximately five acres.

III. SITE HISTORY

According to Tarrant County deed records, Taylor Made Fats, Inc., or its merged predecessors, owned the property from January 1970 to December 1981, when the property was sold to Met Pro, Inc. From 1981 to 1985, Met Pro, Inc. operated zinc and aluminum smelting and casting facilities at the site. According to a Crowley-based citizens' group, Friends Against Chemical Toxins (FACT), Met Pro, Inc. operated at the site under the name of Aluminum Sales, Inc. The operation ceased in 1984, when Met Pro, Inc. filed for bankruptcy. In June 1985, Met Pro, Inc. conveyed the property to Priddy-Taylor Investments, a partnership, which then conveyed the property to one of the partners, H.T. Priddy, Jr. From 1986 until it filed for bankruptcy in 1989, Tricon America, Inc. manufactured portable concrete buildings and assembled small fiberglass buildings on the site. Several abandoned offices, warehouses, and other structures remain on the site.

In 1989 gasoline vapors from a leaking underground storage tank (UST) located on the site were detected in several homes located just east of the site. Three USTs were removed from the site by Tricon America, Inc. and in April 1989 soil vapor extraction systems were installed at the adjacent residential areas to prevent hydrocarbon vapors from entering the dwellings. With the removal of the USTs, the focus of sampling program shifted to the large ash pile located just south of the northern boundary of the site. From 1989 through 1992, both the U.S. Environmental Protection Agency (EPA) and the Texas Water Commission (TWC), a predecessor agency to the TNRCC, conducted inspections and sampling at the site.

These investigations indicated that the primary contaminants of concern at the Tricon site are zinc and aluminum smelting and casting waste which were disposed of in the onsite ash pile. The contaminants in the ash pile wastes include aluminum, barium, cadmium, chromium, copper, lead, nickel, silver and zinc. In April 1990, the EPA consolidated the ash pile and the waste at the northern edge of the property on the side of a bluff and applied an asphalt binder to the ash pile to prevent its dispersion by wind and/or surface run-off. In December 1990 the EPA installed a cap over the ash pile. The cap consisted of a plastic liner kept in place by interlocking concrete blocks (Triloc). A fence was also installed around the Tricon site to control entrance to the site by unauthorized persons. In January 1991 Ecology and Environment, under the direction of the EPA, performed a Hazard Ranking System score analysis and the Tricon site was given a score of 7.2.

IV. SUMMARY OF INVESTIGATION REPORTS

A. REMEDIAL INVESTIGATION

Since the investigations conducted by the EPA and the TWC did not completely delineate the extent of contamination, in November 1993, the TNRCC retained Intera, Inc. to conduct a Remedial Investigation of the site. Intera, Inc. completed the Remedial Investigation in March

1997. Intera, Inc. collected and analyzed samples from surface and sub-surface soils, ash, groundwater at the site, and surface water and sediment in Deer Creek. Details of sampling and analysis activities and data are included in the Remedial Investigation Report (Intera, Inc., March 19,1997). A summary is provided below.

Surface Soil: Intera, Inc. collected 125 surface soil samples from 99 locations and analyzed the samples for total metals, including aluminum, barium, cadmium, chromium, copper, lead, nickel, silver and zinc. The analytical data were compared with the site-specific **Preliminary Remediation Goals**. Based on this comparison, cadmium, chromium, copper, lead, and zinc exceeded the Preliminary Remediation Goals.

Subsurface Soil: Ninety-one subsurface soil samples were collected and analyzed for the same parameters mentioned above for the surface samples. Based on this comparison, barium, cadmium, chromium, copper, lead, nickel, silver, and zinc exceeded the Preliminary Remediation Goals..

Sediment: Twenty-four sediment samples were collected from Deer Creek at locations both upstream and downstream of the site, and from the surface drainage pathways leading north from the site toward the creek. The samples were analyzed for total recoverable petroleum hydrocarbons and the total metals, including aluminum, barium, cadmium, chromium, copper, lead, nickel, silver and zinc. Analysis of samples collected at different depths of the sediment showed that the presence of metals was primarily confined to the upper three inches. However, none of these parameters analyzed exceeded the Preliminary Remediation Goals..

Surface Water: Eight surface water samples were collected from six locations in Deer Creek, both upstream and downstream of the site. The samples were analyzed for total metals, including aluminum, barium, cadmium, chromium, copper, lead, nickel, silver and zinc; benzene, toluene, ethyl-benzene, and total xylenes ; total recoverable hydrocarbons; total dissolved solids ; and balanced ions. The results of the surface water samples were compared to the Preliminary Remediation Goals. Based on this comparison, two metals, aluminum and chromium, exceeded the regulatory levels. However, chromium was detected above regulatory levels upstream of the site, and aluminum was detected above the regulatory levels both upstream and downstream of the site.

Groundwater: Intera, Inc. collected 129 groundwater samples from 36 monitor wells during four rounds of sampling. The samples were analyzed for the same parameters as for the surface water. The analytical results were compared with the site-specific Preliminary Remediation Goals. The initial sample results for aluminum, barium, cadmium, chromium and lead exceeded the Preliminary Remediation Goals. However, during the third and fourth sampling events, the concentrations of barium, cadmium and chromium no longer contaminants exceeded the Preliminary Remediation Goals for groundwater. Aluminum concentrations were possibly indicative of naturally occurring levels, and lead was consistently detected in one or more monitor wells in the residential area east of the site, and the TNRCC believes that the presence of lead is due to the residual impact from the leaking underground petroleum storage tanks. The aquifer is a perched groundwater zone which will not provide a sustainable yield to be a drinking water source.

Ash: Twelve ash samples were collected from the fill/waste located under the Triloc cover at the northern portion of the site The samples were analyzed for metals including arsenic, barium, cadmium, chromium, copper, mercury, lead, nickel, selenium, silver and zinc, using the Toxicity Characteristic Leachate Procedure (TCLP) and for total metals, including aluminum, barium, cadmium, chromium, copper, lead, nickel and zinc. Results of the TCLP analyses indicated that the metals concentrations were below the hazardous levels for all metals, thus the ash was classified as non-hazardous for Remedial Actions or disposal purposes.

B. BASELINE RISK ASSESSMENT (BRA)

1. Human Health

A Baseline Risk Assessment is a procedure which uses a combination of facts and assumptions to estimate the potential for adverse effects on human health from exposure to contaminants found at a site. Risks are determined by comparing

conservatively pre-calculated medium specific concentration values that are protective of human health, and actual chemical concentrations at a site. Conservative assumptions used in calculating risks weigh in favor of protecting human health.

The risk assessment process begins with the evaluation of the current site conditions and current site risk, which assesses the risk posed to human health if the site were not cleaned up. The Baseline Risk Assessment is also used to develop sufficient risk information to assist in the selection of appropriate Remedial Alternatives and **Remediation Goals.**

In the Baseline Risk Assessment for the Tricon site, the risks were calculated based on the Preliminary Remediation Goals to ascertain risks to human health and environment. Preliminary Remediation Goals are based on an excess carcinogenic risks of one in one million and a Hazard Quotient of 1 for applicable Residential and Industrial pathways of exposure. Remediation of the site will be based upon containment or removal of contaminants that exceed the lowest PRG for a given media. All exposure pathways for each media were addressed and included the following:

1) Soil: Ingestion, Inhalation, Dermal, Migration to groundwater;

2) Sediment: Ingestion, Dermal;

3) Surface water: Ingestion, Dermal; and

4) Groundwater: Ingestion, Dermal.

The Preliminary Remediation Goals are finalized into Remediation Goals, which define the clean-up needed at the site. The Remediation Goals for barium, cadmium, chromium, lead and zinc are presented on Table 1.

2. Ecological

In accordance with the State requirements, an "Exclusion Criteria" list was used to evaluate the site for the potential for contaminants at the site to pose an unacceptable risk to the ecological environment. As part of the Remedial Investigation, a screening level ecological risk evaluation was performed. Heavy metals in the sediments were the only contaminants found in Deer Creek. These metals include aluminum, barium, copper, nickel and zinc. None of these five metals is believed to bioaccumulate/biomagnify to a degree that warrants ecological concern. This contamination had occurred before the ash pile was capped in 1990. Deer Creek currently supports a healthy and diverse population of organisms. In-stream remediation would cause the mobile receptors to relocate and would injure or destroy the less mobile and immobile receptors.

C. FOCUSED FEASIBILITY STUDY

The Focused Feasibility Study compared different possible Remedial Action alternatives, which are based on criteria established by State regulations. The proposed Remedial Action for the Tricon site is selected based on the Remedial Action that the Executive Director of the TNRCC determines to be the lowest cost alternative, which is technologically feasible and reliable, effectively mitigates and minimizes damage to the environment, and provides adequate protection of the public health and safety and the environment. Three Remedial Action alternatives were considered for the Tricon Facility including:

1) A-1 – No Action

2) A-2 – Excavation and Off-site Disposal

3) A-3 – Excavation, Solidification/Stabilization, and On-site Containment

Four Remedial Action alternatives were evaluated for the Triloc Cap Area, including:

1) B-1 – No Action

2) B-2– Cap Repair and Installation of a French Drain

3) B-3 – Excavation and Off-site Disposal of the Triloc Cap Area Waste

4) B-4 – Excavation, Solidification/Stabilization of the Triloc Cap Area Waste with On-site Containment

D. SUPPLEMENTARY FOCUSED FEASIBILITY STUDY

A Supplementary Focused Feasibility Study was conducted to define the exact dimension of the contaminated areas in the Tricon Facility by collecting and analyzing additional samples around the previously identified sample locations. Based on these results, the TNRCC decided to perform an additional removal action at the Tricon Facility. This removal action included excavating additional contaminated soils and moving them to the Triloc Cap Area. This additional alternative was designated as A-4.

For the Triloc Cap Area, an additional alternative, B-5, was developed that considers installing a retaining wall at the property boundary, moving off-property waste material onto the site, behind the retaining wall, repairing the Triloc cap, and constructing a French drain.

VI. PROPOSED REMEDIAL ACTIONS

A. TRILOC CAP AREA

During a **Public Meeting** held on August 26, 1999 the TNRCC proposed Remedial Action alternative B-2 (Cap Repair and Installation of a French Drain) as the Remedial Action for the Triloc Cap Area. That Remedial Action consisted of repairing the existing plastic cap and extending it southward to cover the entire waste area followed by installing a French drain at the southern edge of the waste pile to divert any surface run-off and groundwater away from the waste pile under the cap.

However, during the meeting TNRCC received many comments and suggestions from the public regarding the effectiveness of the proposed Remedial Action. As a result of these comments and suggestions the TNRCC decided to further investigate to better characterize the waste and re-evaluate the costs of remediation. The TNRCC retained another engineering company, Harding Lawson Associates (HLA) to conduct the supplementary investigation.

HLA collected sixteen samples by vertical and horizontal drilling of the waste pile and the samples were analyzed by Toxicity Characteristic Leachate Procedures (TCLP). The analytical data revealed that the waste was non-hazardous Class II waste. A letter report of the Supplemental Sampling of the Waste Pile dated December 3, 1999 was submitted to the TNRCC. Because of the reclassification of the wastes, the cost of excavation, transportation and disposal at an off-site disposal facility would be much less than the costs previously estimated. Based on the new cost estimate, the TNRCC now proposes to excavate the waste and dispose of it off-site. After excavation of the waste the site will be sampled and analyzed to confirm successful remediation.. The existing monitor wells will be closed. The site will be restored and fenced within the property boundary. Currently the waste pile extends over the properties of the City of Crowley, Harbison-Fischer Manufacturing Company and Burlington Northern and Santa Fe Railroad Company. Since the site will remediated to the non-residential risk level, it will be deed recorded for non-residential land use.

B. TRICON FACILITY

The **Removal Action,** which consisted of excavation of the areas containing soils having metal concentrations above the **Preliminary Remediation Goals** at the Tricon Facility and moving the excavated soils to the Triloc Cap Area, was completed in July,1999. A fence was also installed separating the Tricon Facility from the Triloc Cap Area.

As all the soils contaminated above the Preliminary Remediation Goals were removed during the Removal Action, the site does not pose a threat to public health and safety or the environment. Thus, The TNRCC considers no further action necessary for the soils of the Tricon Facility.

VII. EVALUATION OF THE PROPOSED REMEDIAL ACTION

The proposed Remedial Action for the Tricon site is evaluated and selected on the Remedial Action that the Executive Director of the TNRCC determines to be the lowest cost alternative which is technologically feasible and reliable, effectively mitigates and minimizes damage to the environment, and provides adequate protection of the public health and safety and the environment.

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VIII. SUMMARY OF RECOMMENDED REMEDIAL ACTION

As a result of an evaluation of the above mentioned criteria, the TNRCC proposes Remedial Action alternative B-3 (Excavation and Off-site Disposal of the Triloc Cap Area Waste) as the remedy for the Tricon site.

IX. COMMUNITY PARTICIPATION IN THE SUPERFUND PROCESS

The public is invited to comment on the proposed Remedial Action for the Tricon site. Those wanting to make oral comments may do so at the **Public Meeting**. The meeting is scheduled for February 10, 2000, at 7:00 p.m., at the Crowley City Hall, 120 N. Hampton Road , Crowley, Texas. The Public Comment Period begins January 6, 2000, and ends February 10, 2000, at the close of the public meeting. During this time period, the public may comment on any aspect of the site, the proposed Remedial Action, the investigation of the site or other TNRCC actions concerning the site. Written comments concerning the proposed Remedial Action should be submitted at least 5 days before the public meeting to:

Subhash C. Pal, P.E., Project Manager
Superfund Cleanup Section (MC 143)
Remediation Division
Texas Natural Resource Conservation Commission
P.O. Box 13087
Austin, Texas 78711-3087

The TNRCC will respond to all comments received during the public comment period in the **Responsiveness Summary**. The Responsiveness Summary will be made available to the public upon request and in the site files.

X. GLOSSARY

Feasibility Study (FS) — A study which describes and evaluates a set of remedial action alternatives for effectively mitigating or minimizing damage to, and providing adequate protection of, the public health and safety and the environment.

Hazard Ranking System (HRS) — The method used by the U.S. Environmental Protection Agency and the TNRCC to evaluate relative potential of hazard substance release to cause health or safety problems, ecological or environmental damage. The scoring system was developed by the U.S. Environmental Protection Agency as set out in 40 Code of Federal Regulations Part 300, Appendix A, as amended.

Preliminary Remediation Goals — The concentration of contaminants in soil, sediment, water or air which are protective of human health, safety and the environment.

Proposed Remedial Action Document (PRAD) — The document which describes the TNRCC's planned remediation.

Remedial Action — An action, including remedial design and post- closure care, consistent with a remedy taken instead of or in addition to a removal action in the event of a release or threatened release of hazardous substances into the environment to prevent or minimize the release of a hazardous substance so that the hazardous substance does not cause an imminent and substantial endangerment to present or future public health and safety or the environment.

Remedial Investigation — An investigative study which may include removals, feasibility study, baseline risk assessment, or similar study , designed to adequately determine the nature and extent of release or threatened release of hazardous substances and, as appropriate, its impact on airs, soils, groundwater and surface water, both within and beyond the boundaries of the facility.

Remediation Goals—The concentration of contaminants in soil, sediment, water or air which are protective of human health, safety and the environment and are the goals of a Remedial Action or Removal Action.

Responsiveness Summary — A document in which the TNRCC summarizes its response to all comments received on the PRAD during the public comment period.

Texas Natural Resource Conservation Commission (TNRCC) — The State agency given primary responsibility for implementing the constitution and laws of this State relating to the conservation of natural resources and protection of the environment.