Environmental Assessment

1. **Date:** April 11, 2016
2. **Submitter:** Enviro Tech Chemical Services, Inc.
3. **Address:** 500 Winmoore Way, Modesto, CA. 95358
4. **Description of Proposed Action:**
    a. Description of the Requested Action: The FCS proposed in the Food Contact Notification is composed of peroxyacetic acid (PAA), hydrogen peroxide (H_2O_2), acetic acid, 1-hydroxy ethylidene-1,1-diphosphonic acid (HEDP) and optionally sulfuric acid. The proposed FCS is intended as an antimicrobial agent in: (1) brines, sauces, and marinades to be applied on the surface or injected into processed or unprocessed, cooked or uncooked whole or cut poultry and (2) in surface sauces and marinades applied on processed and preformed meat and poultry products as described in 21 CFR 170.3(n)(29) and (34). The highest use concentration of the FCS is 50 ppm as peroxyacetic acid, 18.4 ppm as H_2O_2 and 6 ppm as HEDP. The typical use concentration of the FCS is 40 ppm as peroxyacetic acid, 14.7 ppm as H_2O_2 and 1.9 ppm as HEDP.
    b. The Need for the Action: The FCS is requested for use as an antimicrobial agent in: (1) brines, sauces, and marinades to be applied on the surface or injected into processed or unprocessed, cooked or uncooked whole or cut poultry and (2) in surface sauces and marinades applied on processed and preformed meat and poultry products. The need for an antimicrobial to treat brines, sauces or marinades in poultry plants arises from the fact that marinades for example, may be re-applied on poultry more than once and are often re-applied over a period of time, typically 4 hour intervals, during an 8 hour shift. Following the initial marinade treatment, in many cases, the residual marinade is recovered and re-used on new poultry during the 4 hour interval. The re-used marinade can cross-contaminate

fresh otherwise uncontaminated poultry. The FCS is requested as an antimicrobial intervention to eliminate such cross-contamination.

c. Brief Discussion of the Use and Disposal of the FCS: The FCS will be used in: (1) brines, sauces, and marinades to be applied on the surface or injected into processed or unprocessed, cooked or uncooked whole or cut poultry and (2) in surface sauces and marinades applied on processed and preformed meat and poultry products. In a typical marinade operation, a fresh marinade batch containing the FCS may be made prior to each 4 hour interval of an 8 hour shift, and then disposed after 4 hours of use. The marinade batches are commonly blended in 50-200 gallon tanks. Following each 4 hour interval, the remainder of the marinade batch, typically up to 30-40 percent, is treated at the meat or poultry processor's on-site pretreatment facilities before discharge to the publicly-owned treatment works (POTW) and surface waters, depending upon whether the facility has an individual NPDES permit. Therefore, meat and poultry processors discharge their waste water first to onsite treatment facilities and subsequently to POTWs or directly to surface waters if the facility has an individual NPDES permit.

   The marinade may be treated with the FCS after the batch is initially made and again treated with the FCS after each hour of use in the marinade operation to maintain the target PAA concentration. For each 4 hour interval, the total amount of marinade that may be typically disposed of in an on-site pretreatment facility or wastewater discharge system is 80 gallons based on a 200 gallon marinade batch. For an 8 hour shift, the total amount of marinade containing the FCS that may be disposed of into an on-site pretreatment facility or wastewater discharge system is 160 gallons. For two 8 hour shifts, the total amount of marinade containing the FCS that may be disposed of into an on-site pretreatment facility or wastewater discharge system is 320 gallons. Within a meat or poultry processor's on-site wastewater discharge system, the FCS components would be diluted in a similar manner to other liquid products, then

subsequently diluted further upon entry into the POTW and surface waters. The potential use and disposal of the FCS is discussed below and describes worst case scenarios and associated potential risks along with the EIC and EEC calculations.

5. Identification of Substance:

The FCS is a liquid equilibrium mixture of peroxyacetic acid, hydrogen peroxide and acetic acid. It is made by blending acetic acid, hydrogen peroxide, HEDP (as a chelating agent), optionally sulfuric acid (to speed the reaction process) and reverse osmosis purified water.

Ingredients:

Chemical Name	**CAS#**
Peroxyacetic acid	79-21-0
Hydrogen peroxide	7722-84-1
Acetic acid	64-19-7
Sulfuric acid (optional)	7664-93-9
HEDP (1-hydroxyethylidine-1,1-diphosphonic acid)	2809-21-4
Water	7732-18-5

The basic reaction by the above combination is as follows:
$CH_3CO_2H + H_2O_2 \rightarrow CH_3CO_3H + H_2O$ (molecular weight is 76.05 g/mole)

6. Introduction of Substance into the Environment:

a. Introduction of substances into the environment as a result of manufacture:

The FCS is currently manufactured in an EPA approved facility (EPA Establishment Number 63838-CA-01) at the address listed above, and no unusual or factual threat to the environment exists. Attached is the Facility Registry Service (FRS) website page that documents the EPA Establishment Number at the address listed above. Below is the website link: http://iaspub.epa.gov/enviro/fii_query_detail.disp_program_facility?p_registry_id=110024498890. No extraordinary environmental circumstances would apply to the continued on-going manufacture of the FCS.

b. Introduction of substances into the environment as a result of use/disposal:

The FCS is proposed for use as an antimicrobial agent in: (1) brines, sauces, and marinades to be applied on the surface or injected into processed or unprocessed, cooked or uncooked whole or cut poultry and (2) in surface sauces and marinades applied on processed and preformed meat and poultry products. As discussed above, the marinade containing the FCS is commonly blended in 50-200 gallon tanks and used in 4 hour intervals. The FCS is re-applied on an hourly basis to maintain the desired PAA concentration. Following each 4 hour interval of an 8 hour shift, the remainder of the marinade batch is disposed of into the processor's on-site pretreatment facility before discharging to the local publicly-owned treatment works (POTW) and surface waters, depending upon whether the facility has an individual NPDES permit. Typically, the amount of marinade that may be discharged into the processing plant pre-treatment facility would be no more than 30-40 percent of the marinade batch or 60-80 gallons of marinade during each 4 hour interval based on a maximum batch size of 200 gallons. Assuming that an operation may operate for two 8 hour shifts, the maximum total potential amount of marinade containing the FCS that may be disposed into the on-site pre-treatment facility is 320 gallons per day. In a worst case scenario, if all of the remaining marinade from each 8 hour shift containing 50 ppm PAA of the FCS was washed down the drain during a two shift day, and assuming no degradation of any of the ingredients, the mass of each ingredient that could be washed down the drain based on a maximum of 320 gallons per day would be the following:

Component:	Mass (g)
Purified Water	139.30
Peroxyacetic acid	60.57
Acetic acid	163.53
Hydrogen Peroxide	22.29
HEDP	2.91

In the event that an entire batch of marinade during a 4 hour interval of an 8 hour shift containing the FCS is poured down the drain, the maximum amount of the

FCS that would be disposed to the on-site pre-treatment facility is approximately 200 gallons. The mass of each ingredient from disposing 200 gallons of marinade containing the FCS containing 50 ppm PAA assuming that there is no degradation of any ingredient would be the following:

Component:	Mass (g)
Purified Water	87.06
Peroxyacetic acid	37.85
Acetic acid	102.21
Hydrogen Peroxide	13.93
HEDP	1.82

Treatment of the marinade containing the FCS at an on-site waste water treatment facility and then at a POTW and surface waters is expected to result in a complete degradation of PAA, hydrogen peroxide and acetic acid. The PAA will breakdown into oxygen and acetic acid while hydrogen peroxide will breakdown into oxygen and water[(1)]. PAA, hydrogen peroxide and acetic acid all rapidly degrade on contact with organic matter, transition metals and upon exposure to sunlight. The half-life of PAA in buffered solutions was 63 hours at pH 7 for a 748 ppm solution, and 48 hours at pH 7 for a 95 ppm solution[(2)]. The half-life of hydrogen peroxide in natural river water ranged from 2.5 days when initial concentrations were 10,000 ppm and increased to 15.2 days when the concentration decreased to 250 ppm[(3)].

Biodegradation is the most significant removal mechanism for acetic acid. In biodegradation studies with acetic acid, 99% degraded in 7 days under anaerobic conditions[(4)]. Acetic acid is not expected to concentrate in the wastewater discharged to the POTW and surface waters. Therefore, these substances are not expected to be introduced into the environment to any significant extent as a result of the proposed use of the FCS. As a result, the remainder of this section will consider only the environmental introduction of HEDP.

The Environmental Introduction Concentration (EIC) may be calculated by multiplying the concentration of HEDP in the FCS by the estimated percentage of degradation associated with use of the FCS in brines, sauces and marinades as an antimicrobial that is surface applied or injected in preformed meat or poultry products. HEDP has a much longer half-life than either PAA or H_2O_2, therefore, it is assumed that 100% remains in the FCS. The maximum concentration of HEDP that may be expected in a worst case scenario in the FCS as calculated in Attachment #13 (see Table 3 below) is 6.05 ppm HEDP.

Table 3 shows the concentration of HEDP in the marinade based on the dose of peracetic acid (PAA).

Time Interval (Hours)	Volume of Marinade Remaining (L)	Mass of Poultry Treated (kg)	PAA Conc. (mg/L)	Volume PAA Added (mL)	Conc. HEDP in Marinade (mg/mL)
0-1	757.1	737.1	50	174.4	0.00243
1-2	567.8	737.1	50	65.4	0.00364
2-3	378.5	737.1	50	43.6	0.00484
3-4	189.3	737.1	50	21.8	**0.00605**

The worst-case concentration of HEDP will be used to calculate the EIC. The Human and Environmental Risk Assessment Project (HERA) report showed that HEDP adsorption to wastewater sludge is greater than 90%[7]. To be conservative, an estimate of 80% adsorption to wastewater sludge in sewage treatment plants will be used for the below Estimated Environmental Concentration (EEC) calculations.

The environmental introduction concentration (EIC) of HEDP is based on disposal of the marinade containing the FCS at the end of a 4 hour use interval into the poultry processor's on-site pre-treatment facility. The subsequent EECs including EEC_{sludge} and EEC_{water} are calculated below using the 80:20 partition factor arrived at in the HERA report. With respect to the EEC_{water} calculation, a 10 fold dilution factor is recommended for use when estimating surface water concentrations[6]. Below are the worst-case EIC and EEC_{sludge} and EEC_{water} calculations for HEDP:

HEDP EIC = 6.05 ppm HEDP x 100% remaining = 6.05 ppm HEDP

HEDP EEC_{sludge} = 6.05 ppm HEDP x 80% partition to sludge = 4.84 ppm HEDP EEC_{sludge}

HEDP EEC_{water} = (6.05 ppm HEDP x 20% partition to water) / 10 fold dilution factor = 0.121 ppm HEDP EEC_{water}

7. Fate of the Substance in the Environment:

It is well documented and accepted in the scientific community that PAA and H_2O_2 are short lived in the environment, do not bioaccumulate, have innocuous degradation byproducts, and are of no toxicological or ecotoxicity concern[1, 2, 3]. Peroxyacetic acid and hydrogen peroxide are not expected to survive treatment at the primary wastewater treatment facility due to their reactivity and pH sensitivity[1]. Both compounds are rapidly degraded on contact with organic matter, transition metals, and upon exposure to sunlight[2, 3]. The half-life of PAA in buffered solution solutions was 63 hrs at pH 7 for a 748 ppm solution, and 48 hrs for a 95 ppm solution, also at pH 7[2].

The half-life of hydrogen peroxide in natural river water ranged from 2.5 days when initial concentrations were 10,000 ppm, and increased to 15.2 days when the concentration decreased to 250 ppm[3]. In filtered lake water the half-life of H_2O_2 (initial concentration 3.4 ug/l) was 8.6 hrs-31 hrs. (page 21 reference #3).

Since PAA and H_2O_2 rapidly degrade, they will not be introduced into the natural environment in wastewater at toxic levels. Therefore toxicity and fate data should not be required for these compounds. Biodegradation is the most significant removal mechanism for acetic acid. In biodegradation studies with acetic acid, 99% degraded in 7 days under anaerobic conditions[4].

When wastewater from food processing operations described above is released to a POTW and surface waters, the concentration of HEDP will be further diluted by the additional waters processed by the POTW and surface waters. The maximum HEDP EEC_{water} will be 0.121 ppm and the maximum HEDP EEC_{sludge} will be 4.84 ppm based on

the above calculations using the 10 fold dilution factor for the EECwater and the 80:20 partition ratio to wastewater sludge and wastewater, respectively. The chelating agent, HEDP, is added to the FCS to sequester transition metal ions in solution. HEDP increases shelf life of the product significantly by preventing metal ions from breaking down PAA and H_2O_2. HEDP is in a class of compounds known as a phosphonates. HEDP slowly biodegrades into phosphates at a rate of about 1% per day when chelated with transition metal ions[5]. Because of the nature of the carbon-phosphorus bond in HEDP, it adsorbs very strongly to mineral surfaces and rarely exists free in solution[5]. This means that at the proposed use levels very little free HEDP will enter the environment directly and any that does will be non-toxic to all organisms and slowly degrade into inert phosphate over time. The HERA report shows that HEDP adsorption to sludge is greater than 90%[7]. Our calculations used a conservative estimate of 80% adsorption to sludge in sewage treatment plants.

8. Environmental Effects of Released Substances:

This FCS is intended for microbiological control in brines, sauces and marinades that is surface applied or injected in whole or cut poultry or parts and pieces. The concentrations of the proposed FCS are quite diluted, and once the FCS contacts the balance of the site's wastewater, and subsequently further downstream with the main body of discharge/waste water at the POTW and surface waters, the pH would be such that the peroxygens, PAA and H_2O_2, would degrade rapidly[1,2,3].

a. Aquatic Environment

HEDP is a strong chelating agent and can result in adverse effects on environmental organisms by complexation of essential nutrients[7]. For strong chelating agents, it is suggested that two types of No Observed Effect Concentration's (NOEC's) be determined: an intrinsic NOEC (NOECi) measured with excess nutrients available and an NOEC measured to protect from the chelating effects in natural waters (NOECc)[9]. A realistic NOECc should be determined by testing in natural waters, by predicting metal speciation and algal trace element requirements, and/or using metal speciation modeling programs[9]. However, excess nutrients are expected to be present in industrial

wastewater as eutrophication is a well-known phenomenon seen in industrial wastewaters from food processing facilities[8].

Aquatic toxicity of HEDP is summarized and shown in the following table below.

Table 1: Environmental Toxicity Data for HEDP		
Species	**Endpoint**	**mg/L**
Short Term		
Lepomis macrochirus[9]	96 hr LC_{50}	868
Oncorhynchus mykiss[9]	96 hr LC_{50}	360
Cyprindon variegates[9]	96 hr LC_{50}	2180
Ictalurus punctatus[9]	96 hr LC_{50}	695
Leciscus idus melanatus[9]	96 hr LC_{50}	207 - 350
Daphnia magna[9]	24 – 48 hr LC_{50}	165 - 500
Planemonetes pugio[9]	96 hr EC_{50}	1770
Crassostrea virginica[9]	96 hr EC_{50}	89
Selenastrum capricornutum[7]	96 hr LC_{50}	3
Selenastrum capricornutum[7]	96 hr NOEC	1.3
Algae[7]	96 hr EC_{50}	0.74
Chlorella vulgaris[9]	48 hr NOEC	≥100
Pseudomonas putida[9]	30 minute NOEC	1000
Long Term		
Oncorhychus mykiss[9]	14 day NOEC	60 - 80
Daphnia Magna[9]	28 day NOEC	10 - <12.5
Algae[7]	14 day NOEC	13

Jaworska *et. al*. showed that the acute toxicity endpoints for HEDP ranged from 0.74 – 2,180 mg/L while the chronic NOECs ranged from 60-80 mg/L for the 14 day NOEC for *Oncorhynchus mykiss* and the 28 day NOEC for *Daphnia Magna* was 10 mg/L. Although a chronic NOEC of 0.1 mg/L was reported for reproductive effects in *Daphnia Magna*, it is inconsistent with other toxicity data and Jaworska *et. al*. The relevant endpoint for a high orthophosphate environment is 10mg/L (28 day) NOEC for *Daphnia magna* as published by Jaworska et al. The values calculated herein of HEDP EEC_{water} = 0.121 ppm fall far below these limits so no significant adverse impacts are expected.

b. Terrestrial Environment

HEDP accumulated in wastewater sludge is eventually discharged to land and is not expected to have any adverse environmental impact on the terrestrial toxicity endpoints for plants, earthworms or birds. The NOEC for soil-dwelling organisms was 1000 mg/kg soil dry weight for red worms in soil[(7)]. The 14 day median lethal dose (LD_{50}) for birds was greater than 284 mg/kg body weight[(7)]. As a comparison, the HEDP EEC_{sludge} is 4.84 ppm which is far less than the LD_{50} for birds at 248ppm so no significant adverse impacts are expected.

9. Use of Resources and Energy:

The proposed FCS would not pose any significant additional burden on existing resources or energy in the manufacture, transport, use or disposal of the FCS above and beyond those already existing, and the proposed use will not create any significant additional burden on resources or energy. The FCS is made in a PAA manufacturing facility with existing fixed costs that would not be increased in a significant way by the manufacture of this FCS. The ingredients used in the manufacture of the FCS are purchased in bulk quantities for several products and this FCS would not pose a significant additional burden on those requirements. The transportation of the FCS is similar to other PAA products at the facility and would only increase the cost of transportation by the weight and incremental fuel required for transport. The disposal of the FCS would not significantly increase any wastewater usage or processing costs any more than a similar volume of a product.

10. Mitigation Measures:

The proposed FCS is not reasonably expected to result in any adverse environmental impacts that would require mitigation measures of any kind.

11. Alternatives to Proposed Action:

The alternative of not approving the action proposed herein would result in the cross-contamination of poultry products due to re-use of marinades.

12. List of Preparers:

a. Michael Harvey, BS. Cal. State University, Chico (Chemistry), 30 years of experience conducting ecological risk assessments and preparing regulatory submissions that have been submitted to the EPA and FDA
b. Brent Bankosky, BS., MBA, Pennsylvania State University, MS, Lehigh University, 12 years of experience preparing EPA and FDA regulatory submissions
c. Joseph Donabed, BS, Cal. State Stanislaus University, 3 years of experience preparing EPA and FDA regulatory submissions
d. Tina Rodrigues, BS, Cal. State Stanislaus University, 8 years of experience preparing EPA and FDA regulatory submissions

13. Certification:

The undersigned official certifies that the information presented is true, accurate, and complete to the best of the knowledge of Enviro Tech Chemical Services, Inc.

Date: April 11, 2016
Signature: Name and Title: Michael S. Harvey, President

14. BIBLIOGRAPHY and LITERATURE CITATIONS

(1) EPA: Reregistration eligibility Decision: Peroxy compounds; EPA Case 4072. Doc #738-F-93-026; Dec. 1993.
(2) ECETOC: European Centre for Ecotoxicology and Toxicology of Chemicals, JACC No. 40, "Peracetic Acid and its Equilibrium Solutions"; January 2001
(3) ECETOC: European Centre for Ecotoxicology and Toxicology of Chemicals, JACC No. 22, "Hydrogen Peroxide"; January 1993
(4) U.S. High Production Volume (HPV) Chemical Challenge Program: "Assessment Plan for Carboxylic Food Acids and Salts Category." Acetic Acid and Salts Panel, American Chemistry Council, June 28, 2001
(5) NOWACK, B. (2003) "Environmental chemistry of phosphonates"; Water Research, 1-14.
(6) Rapaport, Robert A., 1988. Prediction of consumer product chemical concentrations as a function of publically owned treatment works treatment type and riverine dilution. Environmental Toxicology and Chemistry 7(2), 107-115. Found online at: http://onlinelibrary.wiley.com/doi/10.1002/etc.5620070204/abstract

(7) HERA – Human & Environment Risk Assessment on Ingredients of European Household Cleaning Products: Phosphonates. 06/09/2004. www.heraproject.com – Phosphonates.
(8) US EPA. Fact Sheet: Ecoregional Nutrient Criteria EPA-822-F-02-008, http://www.epa.gov/waterscience/criteria/nutrient/ecoregions/jan03frnfs.pdf
(9) Jaworska, J.; Van Genderen-Takken, H.; Hanstveit, A.; van de Plassche, E.; Feijtel, T. Environmental risk assessment of phosphonates, used in domestic industry and cleaning agents in the Netherlands. Chemosphere 2002, 47, 655-665. Chemosphere. 2002, 47 655-665.

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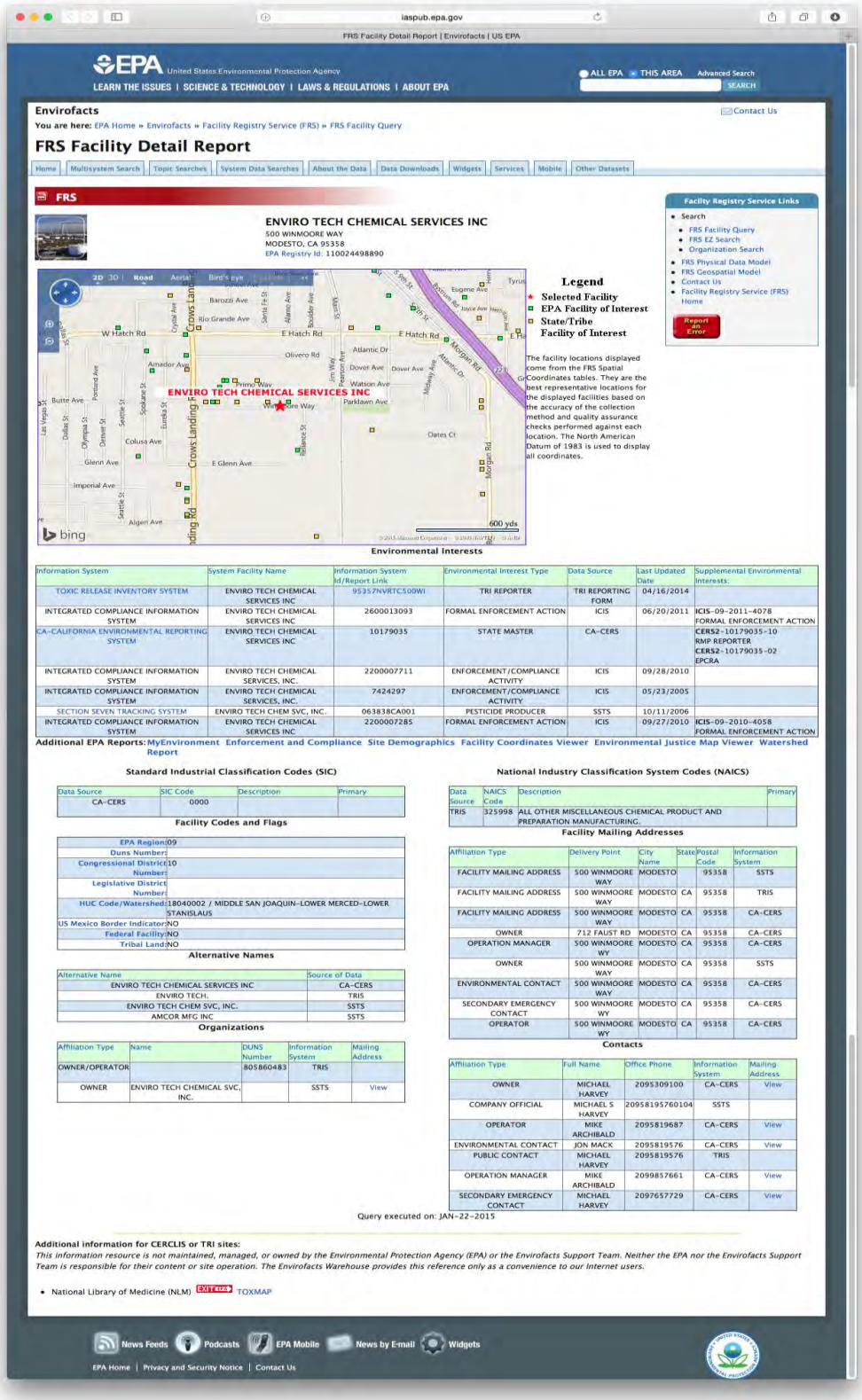

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Environmental Interests

Information System	System Facility Name	Information System Id/Report Link	Environmental Interest Type	Data Source	Last Updated Date	Supplemental Environmental Interests
TOXIC RELEASE INVENTORY SYSTEM	ENVIRO TECH CHEMICAL SERVICES INC	95357NVRTCS00WI	TRI REPORTER	TRI REPORTING FORM	04/16/2014	
INTEGRATED COMPLIANCE INFORMATION SYSTEM	ENVIRO TECH CHEMICAL SERVICES INC	2600013093	FORMAL ENFORCEMENT ACTION	ICIS	06/20/2011	ICIS-09-2011-4078 FORMAL ENFORCEMENT ACTION
CA-CALIFORNIA ENVIRONMENTAL REPORTING SYSTEM	ENVIRO TECH CHEMICAL SERVICES INC	10179035	STATE MASTER	CA-CERS		CERS2-10179035-10 RMP REPORTER CERS2-10179035-02 EPCRA
INTEGRATED COMPLIANCE INFORMATION SYSTEM	ENVIRO TECH CHEMICAL SERVICES, INC.	2200007711	ENFORCEMENT/COMPLIANCE ACTIVITY	ICIS	09/28/2010	
INTEGRATED COMPLIANCE INFORMATION SYSTEM	ENVIRO TECH CHEMICAL SERVICES, INC.	7424297	ENFORCEMENT/COMPLIANCE ACTIVITY	ICIS	05/23/2005	
SECTION SEVEN TRACKING SYSTEM	ENVIRO TECH CHEM SVC, INC.	063838CA001	PESTICIDE PRODUCER	SSTS	10/11/2006	
INTEGRATED COMPLIANCE INFORMATION SYSTEM	ENVIRO TECH CHEMICAL SERVICES INC	2200007285	FORMAL ENFORCEMENT ACTION	ICIS	09/27/2010	ICIS-09-2010-4058 FORMAL ENFORCEMENT ACTION

Additional EPA Reports: MyEnvironment Report | Enforcement and Compliance | Site Demographics | Facility Coordinates Viewer | Environmental Justice Map Viewer | Watershed

Standard Industrial Classification Codes (SIC)

Data Source	SIC Code	Description	Primary
CA-CERS	0000		

National Industry Classification System Codes (NAICS)

Data Source	NAICS Code	Description	Primary
TRIS	325998	ALL OTHER MISCELLANEOUS CHEMICAL PRODUCT AND PREPARATION MANUFACTURING.	

Facility Codes and Flags

EPA Region:	09
Duns Number:	
Congressional District Number:	10
Legislative District Number:	
HUC Code/Watershed:	18040002 / MIDDLE SAN JOAQUIN-LOWER MERCED-LOWER STANISLAUS
US Mexico Border Indicator:	NO
Federal Facility:	NO
Tribal Land:	NO

Facility Mailing Addresses

Affiliation Type	Delivery Point	City Name	State	Postal Code	Information System
FACILITY MAILING ADDRESS	500 WINMOORE WAY	MODESTO		95358	SSTS
FACILITY MAILING ADDRESS	500 WINMOORE WAY	MODESTO	CA	95358	TRIS
FACILITY MAILING ADDRESS	500 WINMOORE WAY	MODESTO	CA	95358	CA-CERS
OWNER	712 FAUST RD	MODESTO	CA	95358	CA-CERS
OPERATION MANAGER	500 WINMOORE WY	MODESTO	CA	95358	CA-CERS
OWNER	500 WINMOORE WAY	MODESTO	CA	95358	SSTS
ENVIRONMENTAL CONTACT	500 WINMOORE WAY	MODESTO	CA	95358	CA-CERS
SECONDARY EMERGENCY CONTACT	500 WINMOORE WY	MODESTO	CA	95358	CA-CERS
OPERATOR	500 WINMOORE WY	MODESTO	CA	95358	CA-CERS

Alternative Names

Alternative Name	Source of Data
ENVIRO TECH CHEMICAL SERVICES INC	CA-CERS
ENVIRO TECH.	TRIS
ENVIRO TECH CHEM SVC, INC.	SSTS
AMCOR MFG INC	SSTS

Contacts

Affiliation Type	Full Name	Office Phone	Information System	Mailing Address
OWNER	MICHAEL HARVEY	2095309100	CA-CERS	View
COMPANY OFFICIAL	MICHAEL S HARVEY	20958195760104	SSTS	
OPERATOR	MIKE ARCHIBALD	2095819687	CA-CERS	View
ENVIRONMENTAL CONTACT	JON MACK	2095819576	CA-CERS	View
PUBLIC CONTACT	MICHAEL HARVEY	2095819576	TRIS	
OPERATION MANAGER	MIKE ARCHIBALD	2099857661	CA-CERS	View
SECONDARY EMERGENCY CONTACT	MICHAEL HARVEY	2097657729	CA-CERS	View

Organizations

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OWNER	ENVIRO TECH CHEMICAL SVC, INC.		SSTS	View

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