Call to Order
Roll Call

Adjourn to a Joint Meeting of the City Council and the Porterville Redevelopment Agency.

JOINT CITY COUNCIL/PORTERVILLE REDEVELOPMENT AGENCY AGENDA
291 N. MAIN STREET, PORTERVILLE, CA
DECEMBER 7, 2011

ROLL CALL: Agency Members

ORAL COMMUNICATIONS
This is the opportunity to address the City Council and/or Redevelopment Agency on any matter scheduled for Closed Session. Unless additional time is authorized by the Council/Agency, all commentary shall be limited to three minutes.

JOINT CITY COUNCIL/REDEVELOPMENT AGENCY CLOSED SESSION:

A. Closed Session Pursuant to:
   2- Government Code Section 54956.9(c) – Conference with Legal Counsel – Anticipated Litigation – Initiation of Litigation: One case.

Adjourn to a meeting of the Porterville City Council.

CITY COUNCIL CLOSED SESSION:

B. Closed Session Pursuant to:
   1- Government Code Section 54956.8 – Conference with Real Property Negotiators/Property: A 30.57 mile line of railroad between Strathmore, CA milepost 268.60 and Jovista, CA milepost 299.17 in Tulare County, particularly that portion of the railroad line within the limits of the City of Porterville. Agency Negotiator: John Lollis. Negotiating Parties: City of Porterville and Union Pacific Railroad Company. Under Negotiation: Terms and Price.
   4- Government Code Section 54957 – Public Employee Performance Evaluation - Title: City Manager.
6:30 P.M. RECONVENE OPEN SESSION
REPORT ON ANY COUNCIL ACTION TAKEN IN CLOSED SESSION

Pledge of Allegiance Led by Council Member Greg Shelton
A Moment of Silence in Memory of Porterville Fire Captain Bob Davison

PRESENTATIONS
Miss Porterville and Court
Employee of the Month – Caroline Thomason
Employee Service Awards
San Joaquin Valley Air Pollution Control District

REPORTS
This is the time for all AB 1234 reports; Committee/Commission/Board Reports; Subcommittee Reports; and Information Items and Reports.

ORAL COMMUNICATIONS
This is the opportunity to address the Council on any matter of interest, whether on the agenda or not. Please address all items not scheduled for public hearing at this time. Unless additional time is authorized by the Council, all commentary shall be limited to three minutes.

CONSENT CALENDAR
All Consent Calendar Items are considered routine and will be enacted in one motion. There will be no separate discussion of these matters unless a request is made, in which event the item will be removed from the Consent Calendar.

1. **City Council Minutes of May 24, 2011**

2. **Budget Adjustment for the 2011-12 Fiscal Year**
   Re: Considering approval of a budget adjustment in the amount of $20,000 to pay for the demolition and acquisition of the property located at 347 W. Orange Avenue.

3. **Airport Lease Renewal – Lot 40**
   Re: Considering approval of the extension of the Lease Agreement between the City of Porterville and Dan and Allison Date of San Luis Obispo, California, for Lot 40 at the Porterville Municipal Airport.

4. **Acceptance of Project – Olive Avenue Rehabilitation**
   Re: Considering accepting project as complete from Bowman Asphalt, and authorizing the filing of the Notice of Completion for the project consisting of the rehabilitation of Olive Avenue between ‘H’ Street and Carmelita Street.
5. **Acceptance of Project – Heritage Center Trailway Extension (Rails to Trails Phase II)**
   Re: Considering accepting project as complete from Dawson-Mauldin Construction, and authorizing the filing of the Notice of Completion for the project consisting of the extension of the existing trail from its current termination point south to the Porterville Heritage Center.

6. **Approval of Annual Transportation Agreement with County of Tulare**
   Re: Considering approval of an Agreement with the County of Tulare to provide contract transit service to residents within the Service Area Boundary Map.

7. **Consolidated Waste Management Authority (CWMA) Membership Report**
   Re: Considering authorization to continue the City’s participation in the CWMA.

8. **Setting the Public Hearing for Library Fines and Collection Procedures**
   Re: Considering approval of the scheduling of a public hearing to take place on December 20, 2011, for consideration of the adoption of library fines and collection procedures.

9. **Amendment to Employee Pay and Benefit Plan – Fire Officers Series**
   Re: Considering approval of a resolution amending the Employee Pay and Benefit Plan for employees represented by the Fire Officer Series.

10. **Review of Local Emergency Status**
    Re: Reviewing the City’s status of local emergency pursuant to Article 14, Section 8690 of the California Emergency Services Act.

   ![A Council Meeting Recess Will Occur at 8:30 p.m., or as Close to That Time as Possible](image)

**PUBLIC HEARINGS**

11. **Public Hearing to Approve Revisions to the Zoning Map**
    Re: Considering adoption of ordinances approving various revisions to the Zoning Map.

12. **Conditional Use Permit PRC-2011-23-C – Proposed Sale of Alcoholic Beverages Under an On-Sale License in Conjunction with the Serving of Meals for a Proposed “Dickie’s Barbeque Pit” Restaurant to be Located at 73 North Main Street (Formerly “Screaming Moose”)**
    Re: Considering approval of a resolution which would allow for the sale of beer and wine under an on-sale license at 73 North Main Street.

**SCHEDULED MATTERS**

13. **Medical Cannabis Regulations – Draft Comprehensive Modifications to Current City Regulations**
    Re: Consideration of proposed modifications to the City’s current regulations pertaining to medical cannabis.

14. **Presentation by Beckman Instruments Seeking Local Support for Partial Delistment of Porterville Superfund Site**
    Re: Consideration of support for Beckman’s petition of the Environmental Protection Agency for partial delistment of the Superfund site.
ORAL COMMUNICATIONS
OTHER MATTERS

CLOSED SESSION
Any Closed Session Items not completed prior to 6:30 p.m. will be considered at this time.

ADJOURNMENT - to the meeting of December 20, 2011 at 5:30 p.m.

Pursuant to Ordinance No. 1766, the Council Meeting shall adjourn no later than 9:45 p.m., unless otherwise approved by a majority of the Council Members present.

In compliance with the Americans with Disabilities Act and the California Ralph M. Brown Act, if you need special assistance to participate in this meeting, or to be able to access this agenda and documents in the agenda packet, please contact the Office of City Clerk at (559) 782-7464. Notification 48 hours prior to the meeting will enable the City to make reasonable arrangements to ensure accessibility to this meeting and/or provision of an appropriate alternative format of the agenda and documents in the agenda packet.

Materials related to an item on this Agenda submitted to the City Council after distribution of the Agenda packet are available for public inspection during normal business hours at the Office of City Clerk, 291 North Main Street, Porterville, CA 93257, and on the City’s website at www.ci.porterville.ca.us.
Call to Order at 6:00 p.m.
Roll Call: Council Member Ward, Council Member Shelton, Council Member McCracken, Vice Mayor Hamilton, Mayor Irish

Pledge of Allegiance Led by City Manager John Lollis
Invocation – a moment of silence was observed.

ORAL COMMUNICATIONS
- Brock Neeley, requested permission to speak during Item No. 2.
- Cheryl Anderson, inquired about personnel currently available to residents of Jaye Street/Highway 190 area in event of an emergency, such as dam failure.

SCHEDULED MATTER

1. CONSIDERATION OF APPOINTMENT TO MEASURE R CITIZENS’ OVERSIGHT COMMITTEE

Recommendation: That the City Council provide direction to staff.

City Manager Lollis introduced the item and presented the staff report.

COUNCIL ACTION: MOVED by Vice Mayor Hamilton, SECONDED by Council Member Ward that the City Council appoint Kent Hopper to the Measure R Citizens’ Oversight Committee. The motion carried unanimously.

Disposition: Approved.

2. STUDY SESSION – FY 2011-2012 BUDGET

Recommendation: That the City Council accept staff’s presentation, and give direction accordingly.

City Manager Lollis introduced the item and indicated that staff would be making presentations regarding Capital Projects, the General Fund and Measure H.

With regard to streets and roadways, it was noted that the City had approximately $1,000,000 more than usual due to staff’s successful application for CMAQ grant funds. Public Works Director Baldo Rodriguez presented the Council with project options for deliberation of appropriation, which included the reconstruction/rehabilitation of: 1) Olive Avenue from H Street to Westwood; 2) West North Grand Avenue from Newcomb to Highway 65, and the area in front of Carroll’s Tire Warehouse; 3) Henderson Avenue from Jaye Street to Indiana, Henderson and Highway 65, and Henderson from
Prospect to Newcomb Avenue; and 4) Westwood Street from Henderson to Westfield. Staff indicated that portions of the proposed options could also be combined; and the Council spoke about criteria for the use of Measure R funds and traffic counts.

At the request of Council Member Ward, staff spoke about the purchase of equipment as a means of cost savings for future street projects. Public Works Director Rodriguez stated that in the event funds were to become available, staff would recommend the purchase of a grinding machine, because it could be implemented with very little staff training. A discussion ensued regarding a need to invest in cost cutting measures relative to street repair, and whether completion of such work in-house would achieve significant savings. Mr. Rodriguez stated that a cost benefit analysis could be done. Vice Mayor Hamilton then identified annexations and the cutting of streets by utility companies as two additional concerns relative to street conditions.

Mayor Irish noted the large number in attendance for consideration of Measure H funds, and without objection, Measure H was moved forward.

The Council took a ten minute recess at 6:40 p.m.

City Manager Lollis presented the staff report regarding Measure H. Without objection, the Mayor opened up the floor to public comment.

- Mike Rangel, 1370 Chess Terrace, spoke in favor of the use of Measure H funds for the construction of a new fire station.

The Council discussed the funding of a public safety building, staffing of a new facility and ISO ratings at great length. During the discussion Mayor Irish, Council Member Shelton and Council Member Ward expressed their reservations with proceeding due to lack of funds, and Vice Mayor Hamilton voiced his support for the project. With regard to the question of staffing, Fire Chief Garcia indicated that it was possible to staff a new facility with current resources if concessions regarding vacation leave were agreed upon by the fire employee associations. The Council directed staff to define what concessions need to be made prior to budget adoption in June.

The Council recessed for ten minutes at 7:30 p.m.

Without objection, City Manager Lollis presented the staff report regarding the General Fund budget. During his staff report, Mr. Lollis spoke of a decrease in Utility Users Tax revenue and an increase in expenditures due in part to increased Public Employee Retirement System (PERS) pension costs and the approaching expiration of the Vehicle License Fund (VLF) tax extension. Vice Mayor Hamilton complimented staff for providing a clear breakdown of expenses and having a contingency plan in place.

City Manager Lollis then presented a report regarding capital projects funded by the General Fund and/or dedicated grant funds, which included: 1) lighting of the Veteran’s Skate Park and playing fields at the Sports Complex; 2) construction of a parking lot on the undeveloped area between the Stout Building and the Spencer House; 3) continued development of the Fire Training Facility training props; 4) and design of Chase Avenue park development.
Council Member Ward expressed an interest in adding 2-4 lighted softball fields for adults at the Sports Complex; and requested an estimate on cost. There was some brief discussion regarding the need for ball fields, the different between softball and baseball fields, and possible locations.

Lastly, the City Manager spoke about the planned new Animal Shelter on Grand Avenue. Although $500,000 had been budgeted for construction of the facility, Mr. Lollis stated that up to $500,000 in additional funds would need to be appropriated to completed construction of Phase I, which would include up to one hundred kennels. Council Member Shelton inquired about the costs associated with sheltering animals and revenues derived from licensing and adoption fees. The Police Chief addressed Council inquiries, and spoke of the need and benefits of having a local shelter.

In consideration of capital projects involving the City’s water system, the City Manager reviewed projects were anticipated to be completed in the coming fiscal year with CIEDB loan funds. It was noted that due to cost savings in project construction approximately $1.4 million of the loan would be unexpended. The City could expend the remaining funds on additional water development or attempt to return the unspent funds to the State in an effort to reduce the City’s annual debt service commitment. Staff recommended that the Council schedule a study session for the purpose of reviewing the Water Fund, the need for continued replacement of the distribution system, and increasing groundwater recharge efforts.

The City Manager then briefly spoke regarding capital projects involving the City’s sewer and storm drain systems, which consisted of annexation sewer extension projects, upgrades to the storm drains system at Zalud Park, and the development of the storm drain reservoir on the west side of West Street.

Disposition: Staff direction given.

The Council adjourned at 8:44 p.m. to a joint meeting of the Porterville City Council and the Redevelopment Agency.

**JOINT CITY COUNCIL/PORTERVILLE REDEVELOPMENT AGENCY MINUTES**

**291 N. MAIN STREET, PORTERVILLE, CA**

Roll Call: Agency Member Ward, Agency Member Shelton, Agency Member McCracken, Vice Chair Hamilton, Chair Irish

**WRITTEN COMMUNICATIONS**

**ORAL COMMUNICATIONS**

None

**JOINT SCHEDULED MATTER**

RDA-01. FUNDING OPTIONS FOR PORTERVILLE REDEVELOPMENT AGENCY

Recommendation: That the City Council:
1. Approve a three (3) year funding plan which will be revisited on an annual basis with the adoption of the City budget, or upon the State elimination of redevelopment agencies;

2. Conceptually approve Option No. 3 as recommended by Staff for FY’s 2011/12, 2012/13, and 2013/14 and direct Staff to the prepare the General Fund Budget with the proposed expenditure for FY 2011/12 for Council action; and

3. Authorize the City Manager to implement the City’s Council direction.

That the Redevelopment Agency:

1. Authorize Agency Staff to prepare the Redevelopment Agency Budget for FY 2011/12 accordingly; and

2. Authorize the City Manager to implement the Agency Board’s direction.

City Manager Lollis introduced the item, and Community Development Director Dunlap presented the staff report. There was discussion regarding uncertainties where the County was concerned County, and it was requested that a payback structure be incorporated into Option No. 3. Council Member Shelton then expressed his concerns regarding the Redevelopment Agency in general, and made inquiries regarding staffing levels in the Community Development Department.

COUNCIL ACTION: MOVED by Council Member McCracken, SECONDED by Vice Mayor Hamilton that the City Council approve a three (3) year funding plan which will be revisited on an annual basis with the adoption of the City budget, or upon the State elimination of redevelopment agencies; conceptually approve Option No. 3, as amended to require payback; and authorize the City Manager to implement the Agency Board’s direction.

AYES: Ward, McCracken, Hamilton Irish
NOES: Shelton
ABSTAIN: None
ABSENT: None

AGENCY ACTION: MOVED by Agency Member McCracken, SECONDED by Vice Chair Hamilton that the Redevelopment Agency authorize Agency Staff to prepare the Redevelopment Agency Budget for FY 2011/12 accordingly; and authorize the City Manager to implement the Agency Board’s direction.

AYES: Ward, McCracken, Hamilton Irish
NOES: Shelton
ABSTAIN: None
ABSENT: None

Disposition: Approved, as amended.

The Joint City Council/Redevelopment Agency meeting adjourned at 9:04 p.m. to a meeting of the Porterville City Council.
ORAL COMMUNICATIONS
None

OTHER MATTERS
- Council Member Shelton expressed concern with procedure, such as Council Member McCracken making a motion prior to discussion.
- Council Member Ward spoke about Memorial Day.
- Council Member Shelton spoke about the Weisenberger funeral.

ADJOURNMENT
The Council adjourned at 9:10 p.m. to the meeting of June 7, 2011 at 5:30 p.m.

SEAL

Luisa Herrera, Deputy City Clerk

Ronald L. Irish, Mayor
COUNCIL AGENDA: December 6, 2011

SUBJECT: BUDGET ADJUSTMENT FOR THE 2011-12 FISCAL YEAR

SOURCE: Finance Department

COMMENT: During the course of the fiscal year, budget information becomes available that more accurately identifies revenue projections and project costs. Once known, budget modifications are necessary to complete projects and record revenues. To address budget adjustments in an orderly fashion, all adjustments will be presented as one agenda item for Council's consideration.

There is one (1) adjustment proposed for Council consideration:

(1) Demolition and Acquisition of Property at 347 W Orange Ave

On November 15, 2011, the City Council approved staff's recommendation to appropriate $20,000 from General Fund reserves to facilitate the removal of the burned house, abatement of any hazardous materials and acquisition of the property located at 347 W Orange Ave. The City Council also directed staff to bring back to Council an item requesting a budget adjustment. Staff therefore requests that funds in the amount of $20,000 be appropriated from unallocated General Fund Reserves to pay for the demolition and acquisition of the above-mentioned property with the proceeds from the sale of the property to be deposited back to the General Fund Reserves.

RECOMMENDATION: That Council approve the attached budget adjustment, and authorize staff to modify the expenditure estimate as described on the attached schedule.

ATTACHMENTS: Schedule of Budget Adjustment
# CITY OF PORTERVILLE

## Budget Adjustment

**Date:** December 6, 2011

<table>
<thead>
<tr>
<th>FUND - ACCT</th>
<th>NO.</th>
<th>DESCRIPTION</th>
<th>FUNDING SOURCE</th>
<th>DOLLAR AMOUNT</th>
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<tbody>
<tr>
<td>089-5090-076-880</td>
<td>1</td>
<td>Demolition and acquisition of property located at 347 W Orange</td>
<td>General Fund Reserves</td>
<td>$20,000.00</td>
</tr>
</tbody>
</table>

*Modification No: 1-11/12*
SUBJECT: AIRPORT LEASE RENEWAL – LOT 40

SOURCE: FINANCE DEPARTMENT/PURCHASING DIVISION

COMMENT: Dan and Allison Dale are the current leaseholders of Lot 40 at the Porterville Municipal Airport. The lease will expire on December 31, 2011; however, the lease terms allow for an option to extend the lease for an additional five (5) years, provided the City receives a request to exercise the option 120 days prior to expiration. Paragraph 2 of the Lease Agreement (attached) further states the City’s granting of the option is discretionary, but will not be unreasonably withheld. We received a request from Dr. and Mrs. Dale dated November 7, 2011, asking to continue the lease on Lot 40. Staff recommends that Council waive the 120-day notice requirement and grant the five-year option to extend the lease to 2016.

RECOMMENDATION: That the Council approve the extension of the Lease Agreement between the City of Porterville and Dan and Allison Dale of San Luis Obispo, CA, for Lot 40 at the Porterville Municipal Airport.

ATTACHMENT: Locator Map
Letter from Dr. And Mrs. Dale requesting renewal
Paragraph 2 of original Lease Agreement
November 7, 2011

Susan Hartman
Purchasing Agent
Airport Contracts Admin.
291 N. Main St.
Porterville, CA 93257

Re: Airport Lease Renewal

My lease Agreement for Lot 40 at Porterville Municipal Airport will expire on December 31, 2011. In response to your letter of November 3, 2011, I wish to exercise my option to extend my hanger lease for another five years.

Please notify me as soon as the Porterville City Council approves of this extension.

Very truly yours,

[Signature]

Dr. & Mrs. Daniel R. Dale
4341 Larkspur St.
San Luis Obispo, CA 93401
805-459-7471
daledrdan@aol.com
LEASE AGREEMENT

PORTERVILLE MUNICIPAL AIRPORT

THIS LEASE AGREEMENT ("Lease"), executed at Porterville, California the first day of January 2002 by and between the CITY OF PORTERVILLE, a charter city and municipal corporation of the State of California, hereinafter referred to as "City" and WALTER D. & GEORGE W. BURLESON, hereinafter referred to as "Lessee".

WHEREAS, City owns and operates an airport in the City of Porterville, State of California, commonly known and described as "Porterville Municipal Airport"; and

WHEREAS, Lessee desires to lease a portion of said airport for the purpose of operating an existing aircraft hangar to be used for the parking and storage of aircraft and other activities incidental thereto; and

WHEREAS, it is the desire of City to utilize said airport for the general public by its development and use in providing aeronautical-related facilities and service.

NOW, THEREFORE, IT IS MUTUALLY AGREED as follows:

1. Premises: Demised Premises: City, for and in consideration of the covenants, conditions, agreements, and stipulations herein set forth, does hereby demise and lease to Lessee, and Lessee hereby hires from City, those certain premises situated in the City of Porterville, State of California, described as Lot 40 at the Porterville Municipal Airport, more particularly described in Exhibit A being attached hereto and by this reference made a part hereof.

2. Term: The term of this lease shall commence on January 1, 2002, both parties having executed the same, and shall terminate on December 31, 2011, provided Lessee is not in default with respect to any of the conditions or covenants of this lease, Lessee shall have an option to request an extension of the terms hereof for an additional period of five (5) years, by giving written notice thereof to Lessor not less than 120 days prior to expiration of this agreement or any five (5) year extension. Lessor is not obligated to grant any extension but said option shall not be unreasonably withheld.
SUBJECT: ACCEPTANCE OF PROJECT – OLIVE AVENUE REHABILITATION

SOURCE: Public Works Department - Engineering Division

COMMENT: Bowman Asphalt has completed the Olive Avenue Rehabilitation Project per plans and specifications. The project BASE BID included the rehabilitation of Olive Avenue between 'H' Street and Carmelita Street including Cold in Place Recycling (CiPR) three (3) inches of existing asphalt concrete, application of a thin asphalt overlay, striping, markings and related work. The project included add alternates and they are listed below:

- Add Alternate A - CiPR: Carmelita Street to Indiana Street.
- Add Alternate B - CiPR: Indiana Street to Cobb Street.
- Add Alternate C - Install median island artificial turf from H Street to Carmelita Street.
- Add Alternate D - Install median island artificial turf from Carmelita Street to Indiana Street.
- Add Alternate E - Install median island artificial turf from Indiana Street to Cobb Street.

Staff carefully tracks construction costs of all Capital Improvements Projects. Consistent with Council's direction, staff has commenced with the reporting of project construction expenditures. On August 16, 2011, City Council awarded the Base Bid, Add Alternate A, Add Alternate B and authorized expenditure of $1,071,000 for construction, construction management and quality control services for the Olive Avenue Rehabilitation Project. The following itemizes the construction-related costs in two categories: 1) the construction contract, and 2) a combination of construction management and quality control.

1) Final construction cost is $942,771.76.

2) Construction management was performed by staff and quality control by Consolidated Testing Laboratory with assistance from Asphalt Paving and Recycling Technologies. The cost for both services was $21,025.55, which is 2.2% of the awarded construction contract. This amount is less than the 2.7% construction management and quality control amount requested at time of award.

Dir Appropriated/Funded CM Item No. 4
Total project construction costs equate to $963,797.31, which is less than the $1,071,000 overall budget approved by Council at the time of award.

Local Transportation Fund is the funding source for this project as approved in the 2011/2012 Annual Budget.

On September 6, 2011, City Council authorized expenditure of $136,783.75 to replace median island grass with artificial turf on Olive Avenue between "H" Street and Cobb Street. Add Alternates C, D, and E were awarded. This work is complete and final cost of construction is $136,783.75. Construction management costs are included in the $21,025.55 amount reported above. Local Transportation Fund is the funding source for this portion of the project.

Bowman Asphalt requests that the City accept the project as complete. Staff reviewed the work and found it acceptable.

**RECOMMENDATION:** That City Council:

1. Accept the project as complete;

2. Authorize the filing of the Notice of Completion; and

3. Authorize the release of the 10% retention thirty-five (35) days after recordation, provided no stop notices have been filed.

**ATTACHMENT:** Locator Map

[FilePath: General\Council\Acceptance of Project - Olive Avenue Rehabilitation - 2011-12-07.doc]
COUNCIL AGENDA: DECEMBER 7, 2011

SUBJECT: ACCEPTANCE OF PROJECT – HERITAGE CENTER TRAILWAY EXTENSION (RAILS TO TRAILS PHASE II)

SOURCE: Public Works Department - Engineering Division

COMMENT: Dawson-Mauldin Construction has completed the Heritage Center Trailway Extension Project per plans and specifications. The project included an extension of the existing trail from its current termination point (south of Olive Avenue) south to the Porterville Heritage Center. The current project is a trailway between West Olive Street and the cul-de-sac at the end of East Walnut Avenue. This phase consisted of approximately 1,000 feet of trail and connected two existing trail segments.

Staff carefully tracks construction costs of all Capital Improvements Projects. Consistent with Council’s direction, staff has commenced with the reporting of project construction expenditures. On April 5, 2011, City Council authorized expenditure of $293,076.77 for construction, construction management and quality control services for the Heritage Center Trailway Extension Project. The following itemizes the construction-related costs in two categories: 1) the construction contract, and 2) a combination of construction management and quality control.

1) Final construction cost is $244,278.

2) Construction management was performed by staff and quality control by Consolidated Testing Laboratory. The cost for both services was $18,896.06, which is 7.7% of the awarded construction contract. This amount is less than the 9% construction management and quality control amount requested at time of award.

Total project construction costs equate to $265,174.06, which is less than the $293,076.77 overall budget approved by Council at the time of award.

Funding sources for the project are Measure R “Pedestrian/Bike,” ARRA and Re-Leaf Grant as included in the 2010/2011 Annual Budget.

Dawson-Mauldin Construction requests that the City accept the project as complete. Staff reviewed the work and found it acceptable.

Dir [Signature] Appropriated/Funded [Signature] MB CM [Signature] Item No. 5
RECOMMENDATION: That City Council:

1. Accept the project as complete; and

2. Authorize the release of the final payment immediately.

ATTACHMENT: Locator Map

P:\pubworks\General\Council\Acceptance of Project - Herkiage Center Trailway Extension - 2011-12-07.doc
COUNCIL AGENDA: DECEMBER 7, 2011

SUBJECT: APPROVAL OF ANNUAL TRANSPORTATION AGREEMENT WITH COUNTY OF TULARE

SOURCE: Public Works Department - Transit

COMMENT: Since 1983, the City of Porterville has maintained annual agreements with the County of Tulare to provide contract transit service to residents within the unincorporated but urban areas of the community, as currently depicted by the attached Service Area Boundary Map. The upcoming 2012 Short-Range Transit Plan will address expanded service to the Tule River Indian Reservation and Strathmore areas. The last Agreement expired June 30, 2011, and it is proposed that the attached successor Agreement be approved and maintained for FY 2011/2012.

Traditionally, the County has shared in the net operating cost of the system, i.e., total costs less fare box revenues in proportion to the ridership percentage from the unincorporated area as experienced over the previous Agreement year. However, calculations have been modified over the last several years due to the inclusion of the City of Porterville in the Federal Transit Administration (FTA) Section 5307 program.

Last year, the County reimbursed the City at a rate of 27% of net operating costs for the Demand-Response System and at the rate of 30% of net operating costs for the Fixed Route System. This year, the County rate of reimbursement is 28% and 30%, respectively. The County contribution to City transit operations for the FY 2011/2012 Agreement will be $337,874, up $27,372 from last year's contribution of $310,502. The increase in the County's contribution is a direct result of the increase of the Transit Budget and the estimated farebox revenue generated for FY 2011/2012.

RECOMMENDATION: That the City Council enter into an Agreement with the County of Tulare for FY 2011/2012 to provide service to County residents within the Service Area Boundary Map, and authorize the Mayor to execute the Agreement on behalf of the City.

ATTACHMENTS:

1. City/County Transit Agreement
2. Service Area Boundary Map
3. Letter to Tulare County setting forth cost formula components

Dir JS Appropriated/Funded CM Item No. 10
AGREEMENT

THIS AGREEMENT, is entered into as of this ____ day of ________________, 2012, by
and between the COUNTY OF TULARE, hereinafter referred to as the “County”, and the CITY
OF PORTERVILLE, hereinafter referred to as the “City”.

WITNESSETH:

WHEREAS, the County and the City desire to coordinate their respective public
transportation systems in the Porterville Urbanized Area; and

WHEREAS, there are and will continue to be citizens of the County who can reasonably be
served by the City's transit system and there are and will continue to be citizens of the City who
can reasonably be served by the County's transit system; and

WHEREAS, the County and the City recognize the goals of providing a transportation
system to the general public at a reasonable fare and that of providing coordinated public
transportation service within the Porterville Urbanized Area; and

WHEREAS, the County and the City desire to provide for the Joint Exercise of Powers for
the purpose of providing and maintaining public transportation systems in the Porterville
Urbanized Area;

NOW, THEREFORE, County and City mutually agree as follows:

1. Scope of Work. The County and City shall each control, manage, and operate a
separate transit system. The City and County shall furnish each other thirty (30) days prior
written notice of any and all service level and fare level changes.

   (a) County. The County shall provide transit service to those residents of the
       City desiring to use the regularly scheduled service of the County transit system. The
       County shall establish bus stop location(s) within the City which will interface with
       the City bus stop locations and facilitate system transfers. The County stop(s) shall
       be established at locations acceptable to the City. Approval on behalf of the City
       shall be given by the City Transit Coordinator.

   (b) City. The City shall establish a series of bus stop locations within the
       County. The City stops shall be established at locations acceptable to the County.
       Approval on behalf of the County shall be given by the Director of Transportation.
       The City shall provide transit service to County residents desiring transit service
       within the urbanized service area as set forth in Exhibit “A” which is attached hereto
       and made a part hereof by this reference.

2. Management-County. The County shall manage the County transit system in an
appropriate manner, insuring cost effective operation, including marketing the system in a
professional manner and collecting fares from riders on the County transit system.

-1-

Tulare County Agreement No. ________________________________
3. **Management-City.** The City shall manage the City transit system in an appropriate manner, insuring cost effective operation, including marketing the system in a professional manner and collecting fares from riders on the City transit system.

4. **Compensation.** The County shall compensate the City for service to County residents living in the herein agreed upon service area. Compensation shall be limited to a percentage of the operating costs of the City's Transit System. The term “operating cost” as used in this Agreement shall be defined as all costs in the operating expense object classes of the Uniform Systems of Accounts for Public Transit Operators adopted by the State Controller pursuant to Public Utilities Code Section 99243.

Compensation for the period July 1, 2011, through June 30, 2012, will be as follows:

<table>
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<tr>
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<th>Demand Response</th>
<th>Route Service</th>
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<tbody>
<tr>
<td>County LTF (See Below)</td>
<td>$193,214</td>
<td>$383,980</td>
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<tr>
<td>FTA Section 5307Credit</td>
<td>($61,999)</td>
<td>($99,942)</td>
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<td>Fare Box Credit</td>
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</tr>
<tr>
<td><strong>Total Payment</strong></td>
<td>$124,820</td>
<td>$213,054</td>
</tr>
</tbody>
</table>

5. **Authorization of Payment.** FTA Section 5307 Funds will be claimed by the City on the County's behalf. The County by this Agreement authorizes the Tulare County Association of Governments to transfer $337,874 of State Transit Assistance Funds, and/or Local Transportation Funds from the County's 2011/12 Apportionment to the City of Porterville’s Apportionment. The County further authorizes the City to claim said $337,874 as full payment for services under this Agreement. In case of termination of this Agreement prior to June 30, 2012, the County agrees to compensate the City for a proportional amount of the sum of $337,874 based upon the number of days the services were provided by the City during a 365-day period.

6. **FTA Funds.** Per the 2000 Census, the Porterville Urbanized Area has a population of 59,961; 39,615 (66.0%) of which are City residents, and 20,346 (34.0%) of which are County residents. The Porterville Urbanized Area is eligible to receive Federal Transit Administration (FTA) Funds from Section 5307. The City of Porterville will be the claimant of these funds. The City will, at the request of the County, claim and transmit up to 34% of said funds for use by the County for eligible purposes under FTA Section 5307. In no case shall the amount transmitted or credited to the County exceed 34% of the total available. Any Section 5307 Funds which are to be transmitted to the County shall be handled under a separate agreement.

7. **Renegotiation.** In the event a contract between the Federal Transit Administration and the City of Porterville is not executed by June 30, 2012 for the Section
5307 Funds specified in paragraphs 4, 5 and 6, or in the event that $161,941 exceeds 34% of the total FTA Section 5307 funds available to the Porterville Urbanized Area, this contract will be renegotiated to reflect this condition.

8. **Drivers.** The parties shall require that all transit drivers meet all licensing requirements of the State of California.

9. **Indemnification-City.** City shall hold harmless, defend and indemnify County, its agents, officers and employees from and against any liability, claims, actions, costs, damages or losses of any kind, including death or injury to any person and/or damage to property, arising out of the activities of City or its agents, officers and employees under this Agreement. This indemnification specifically includes any claims that may be made against County by any taxing authority asserting that an employer-employee relationship exists by reason of this Agreement. This indemnification obligation shall continue beyond the term of this Agreement as to any acts or omissions occurring under this Agreement or any extension of this Agreement.

10. **Indemnification-County.** County shall hold harmless, defend and indemnify City, its agents, officers and employees from and against any liability, claims, actions, costs, damages or losses of any kind, including death or injury to any person and/or damage to property, arising out of the activities of County or its agents, officers and employees under this Agreement, and any claims made against County alleging civil rights violations by City under Government Code section 12920 et seq. (California Fair Employment and Housing Act). This indemnification obligation shall continue beyond the term of this Agreement as to any acts or omissions occurring under this Agreement or any extension of this Agreement.

11. **Insurance-Liability.** The City and the County shall each provide comprehensive general public liability and comprehensive automotive liability insurance with single limit coverage of not less than $5,000,000 or equivalent self-insurance covering their activities under this Agreement. Prior to commencing operations, each party shall file with the Clerk of the other party certificates of insurance evidencing the coverage required herein and naming the other party, its officers, agents and employees as additional insured’s. Such certificates shall state that the named additional insured’s are not responsible for the payment of any premium or assessment and shall provide that in the event of a cancellation or material change of policy, the insurer shall give the named additional insured’s no less than thirty (30) days advance written notice of such cancellation or change. Upon request, each party shall provide the other with a complete copy of the insurance policy or policies or evidence and terms of self-insurance as required herein.
The parties agree, during the term of the Agreement, to maintain at their own expense (or require of their independent contractors) all necessary insurance for their respective officers, employees, and agents, including but not limited to workers' compensation, disability and unemployment insurance in accordance with state statutory requirements and to provide certificates of such insurance or other evidence of compliance to the other party upon request. The insurance, and evidence thereof, required by this Agreement may be provided either directly by the parties or, if a party contracts with an independent contractor/operator to provide the services required by this Agreement, by the operator of that party's system as deemed appropriate by such party.

12. **Term of Agreement.** This Agreement shall become effective July 1, 2011, and shall continue in full force and effect until June 30, 2012, unless terminated earlier, as herein provided.

13. **Termination.** The right to terminate this Agreement under this provision may be exercised without prejudice to any other right or remedy to which the terminating party may be entitled at law or under this Agreement.

(a) **Without Cause.** Either party shall have the right to terminate this Agreement without cause by giving the other party SIXTY (60) days prior written notice of its intention to terminate pursuant to this provision, specifying the date of termination.

(b) **With Cause.** This Agreement may be terminated by either party should the other party:

(i) be adjudged a bankrupt, or

(ii) become insolvent or have a receiver appointed, or

(iii) make a general assignment for the benefit of creditors, or

(iv) suffer any judgment which remains unsatisfied for 30 days, and which would substantively impair the ability of the judgment debtor to perform under this Agreement, or

(v) materially breach this Agreement.

For any of the occurrences except item (v), termination may be effected upon written notice by the terminating party specifying the date of the termination. Upon a material breach, the Agreement may be terminated following the failure of the defaulting party to remedy the breach to the satisfaction of the non-defaulting party within FIFTEEN (15) days of written notice specifying the breach. If the breach is not remedied within that FIFTEEN (15) day period, the non-defaulting party may terminate the Agreement on further written notice specifying the date of termination.
If the nature of the breach is such that it cannot be cured within a FIFTEEN (15) day period, the defaulting party may submit a written proposal within that period which sets forth a specific means to resolve the default. If the non-defaulting party consents to that proposal in writing, which consent shall not be unreasonably withheld, the defaulting party shall immediately embark on its plan to cure. If the default is not cured within the time agreed, the non-defaulting party may terminate upon written notice specifying the date of termination.

(c) **Effects of Termination.** Termination of this Agreement shall not terminate any obligations to indemnify, to maintain and make available any records pertaining to the Agreement, to cooperate with any audit, to be subject to offset, or to make any reports of pre-termination contract activities.

14. **Notices.** Any notices to be given shall be written and served either by personal delivery or by first class mail, postage prepaid and addressed as follows:

- **County:** Director of Transportation
  Resource Management Agency
  5961 S. Mooney Blvd.
  Visalia, CA 93277
- **City:** Transit Coordinator
  City of Porterville
  291 N. Main Street
  Porterville, CA 93257

15. **Integration.** This Agreement constitutes the sole and only Agreement between the parties hereto as to the services to be provided hereunder. Any prior agreements, promises, negotiations or representations as to such services not expressly referred to herein are of no force and effect.

16. **Modification.** The City and County shall furnish each other thirty (30) days prior written notice of any and all recommended service level and fare level changes. The City shall request and receive approval from the County Director of Transportation prior to any changes in service levels or fare levels in unincorporated areas of the service area. Except for said changes, this Agreement shall be modified or amended only with the prior written consent of both parties.

17. **Assignment.** Neither party shall assign or transfer any of the rights or privileges or any parts thereof of this Agreement without the other party's prior written consent.

18. **Records.** Each party agrees to maintain all books, records, documents, and other evidence pertaining to this Agreement, any disputes surrounding the subject matter of this
Agreement, and any other related circumstances in accordance with generally accepted accounting principles and practices. Each party shall allow the other party's agents or representatives access to such records for inspection, audit, and copying during normal business hours. Each party shall provide further facilities for such access and inspection.

19. **Surveys.** Either the City or the County may conduct periodic ridership surveys. Said surveys shall not interfere with the operation of the system.

20. **Legal Operation.** City and County each shall carry out its obligations under this Agreement in full compliance with all applicable federal, state and local laws, ordinances, rules and regulations.

21. **Construction.** This Agreement reflects the contributions of both parties and accordingly the provisions of Civil Code Section 1654 shall not apply to address and interpret any uncertainty.

22. **Governing Law.** This Agreement shall be interpreted and governed under the laws of the State of California without reference to California conflicts of law principles. Any litigation arising out of this Agreement shall be brought in Tulare County, California. City waives the removal provisions of California Code of Civil Procedure Section 394.

23. **Conflict with Laws or Regulations/Severability.** This Agreement is subject to all applicable laws and regulations. If any provision of this Agreement is found by any court or other legal authority, or is agreed by the parties, to be in conflict with any code or regulation governing its subject, the conflicting provision shall be considered null and void. The remainder of the Agreement shall continue in full force and effect.

24. **Headings.** Section headings are provided for organizational purposes only and do not in any manner affect the scope, meaning or intent of the provisions under the headings.

25. **No Third Party Beneficiaries.** Unless specifically set forth, the parties to this Agreement do not intend to provide any other party with any benefit or enforceable legal or equitable right or remedy.

26. **Waivers.** The failure of either party to insist on strict compliance with any provision of this Agreement shall not be considered a waiver of any right to do so, whether for that breach or any subsequent breach. The acceptance by either party of either performance or payment shall not be considered to be a waiver of any preceding breach of the Agreement by the other party.

27. **Exhibits and Recitals.** The Recitals and the Exhibits to this Agreement are fully incorporated into and are integral parts of this Agreement.

28. **Further Assurances.** Each party agrees to execute any additional documents and to perform any further acts which may be reasonably required to effect the purposes of this Agreement.
29. **Assurances of Non-Discrimination.** City and County expressly agrees that it will not discriminate in employment or the provision of services on the basis of any characteristic or condition upon which discrimination is prohibited by state or federal law or regulation.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed as of the date first above written.

**COUNTY OF TULARE**

By__________________________
Chairman, Board of Supervisors
"COUNTY"

ATTEST: JEAN ROUSSEAU,
County Administrative Officer/
Clerk of the Board of Supervisors.

By__________________________
Deputy

**CITY OF PORTERVILLE**

By__________________________
Mayor "CITY"

ATTEST: Clerk of City of Porterville

By__________________________
Deputy

Approved as to Form,
County Counsel

Approved as to Form,
City Attorney

By__________________________
City Attorney
Resource Management Agency
November 8, 2011
Page Two

2010/2011 FAREBOX REVENUE
The compensation formula includes a credit to the County for fares collected from County residents. It is therefore necessary to allocate farebox revenues between the two service modes. The City of Porterville 2010/11 total farebox revenue was $338,908. This amount is based on the actual FY 2010/2011 transit fare box revenues collected. Of this amount, $38,798 (11.45%) was collected on the Demand-Response service, and $300,110 (88.55%) was collected from Fixed Route system passengers. This allocation is based on the proportion of fees collected on each service mode during FY 2010/11.

COMPENSATION FOR DEMAND-RESPONSE
Based on actual ridership data reported by Sierra Management during FY 2010/11, County residents consumed 28% of the total Demand-Response passenger trips. (Demand-Response trips totaled 14,078; County trips totaled 3,973). This percentage will be used for this year’s calculations.

Based on FY 2003/04 passenger mile information, County residents travel on average 1.42 times as far as the average Porterville resident. It was proposed that this figure be rounded to a distance factor of 1.4, which has been used in the compensation formula for FY 2004/05 through 2011/12. The purpose of this factor is to adjust for the greater number of vehicle miles traveled to provide a trip to a County resident. We will, once again, use this factor for the purpose of completing this year’s calculations until the 2011 Census data is available.

With the above data, the proposed FY 2011/12 compensation for Demand-Response is calculated as follows:

Demand-Response
$ 492,893 x 28% x 1.4 = $193,214
$ 193,214 Total Payment
- 10,863 Farebox Credit (28% x 38,798)
$ 182,351
- 61,999 FTA Section 5307 Credit (34%)
$ 120,352 COUNTY LTF

FIXED ROUTE COMPENSATION FORMULA
The current agreement between the City and the County is based on a projection of service supplied to and consumed by County residents who utilize the eight routes serving the unincorporated areas. For FY 2011/12, the same basis is proposed as in previous agreements, which is 30% of said operating cost being attributed to the County.

Based on the above, the proposed Fixed Route compensation formula is as follows:
Resource Management Agency  
November 8, 2011  
Page Three

Fixed Route  
$1,279,934 \times 30\% = $383,980  
$383,980 Total Payment  
- 90,033 Farebox Credit (30% of $300,110)  
$293,947  
- 99,942 FTA Section 5307 Credit (34%)  
$194,005 COUNTY LTF

**CAPITAL COST**

Capital cost is defined as all depreciation expense attributed to all active City of Porterville Fixed Route and Demand-Response capital expense using the straight line of depreciation. To calculate depreciation expense attributed to County residents, it is proposed that we use the 28% factor from the Demand-Response operating expense calculation, and the 30% factor from the Fixed Route operating expense calculation. These factors can be applied to the total projected depreciation expense for the Demand-Response and Fixed Route capital as follows:

<table>
<thead>
<tr>
<th></th>
<th>FY 10/11 Deprec.</th>
<th>Operating Factor</th>
<th>County Depreciation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed Route</td>
<td>$321,901</td>
<td>30%</td>
<td>$96,570</td>
</tr>
<tr>
<td>Demand-Response</td>
<td>$75,054</td>
<td>28%</td>
<td>$21,015</td>
</tr>
</tbody>
</table>

Based on the above, $117,585 is the proposed County share of depreciation expense. Eighty percent (80%) of capital expense is funded with FTA funds; therefore, only twenty percent (20%) needs to be funded through County LTF funds, being the sum of $23,517.

Total charge to County LTF is $337,874 ($120,352 + $194,005 + $23,517.) Back-up documentation for each of the Demand-Response and Fixed Route formulas is available below.

The charges of $337,874 plus a 3% increase will be used for next year's claim. The following year's claim will be adjusted based on actual numbers.

If you should have any questions, or would like to meet to discuss the proposed compensation formula, please call me at 782-7448.

Very truly yours,

Richard I. Tree  
Transit Manager
November 8, 2011

Attention: Dan Fox, Transit Coordinator
Resource Management Agency
5961 South Mooney Boulevard
Visalia, CA 93277

RE: Formula for Fiscal Year 2011/12 Transit Agreement
Between the City of Porterville and County of Tulare

Dear Mr. Fox:

The following is a description of the cost formula components for the proposed FY 2011/12 transit agreement between our agencies.

**FY 2011/12 COLT/COUNTY SERVICE COST**
Compensation to the City for service to County residents is based on a percentage of the operating and capital costs of the transit system.

**OPERATING EXPENSES**
Operating Expenses is defined as all costs in the operating expense categories of the Administration, Demand-Response and Fixed Route components. In accordance with this definition, the total operating costs for the City of Porterville Transit System for FY 2010/11 is $1,772,827.

The compensation formula requires that transit system operating costs be allocated between the two service modes, Demand-Response and Fixed Route. The City's transit budget is prepared in three segments: Administration, Demand-Response and Fixed Route. The only segment based on the proportion of service hours to be operated in each mode is the Administration segment, which segment has been apportioned to Demand-Response and Fixed Route based on the following percentages. The balance of the expense allocation in each service mode represents actual budget figures for that service mode (service hours based on actual revenue hours for FY 2010/11).

<table>
<thead>
<tr>
<th>Service Mode</th>
<th>Service Hrs.</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand-Response</td>
<td>4,038</td>
<td>14%</td>
</tr>
<tr>
<td>Fixed Route</td>
<td>24,430</td>
<td>86%</td>
</tr>
<tr>
<td>Total</td>
<td>28,468</td>
<td>100%</td>
</tr>
</tbody>
</table>
LTF Agreement Worksheet

LTF Agreement
City of Porterville/County of Tulare – Fiscal Year 2011/12

2010/11 Revenue Hours
Demand-Response 4,038
Fixed Route 24,430
Total Revenue Hours 28,468
Demand-Response 14% of Total Rev. Hrs.
Fixed Route 86% of Total Rev. Hrs.

FY 2010/11 Budget Actual
Demand-Response $492,893 (Operating Cost)
Fixed Route $1,279,934 (Operating Cost)
Total Operating Budget $1,772,827

FY 2010/11 Farebox Revenue
Demand-Response $38,798 (11.45%)
Fixed Route $300,110 (88.55%)
Total $338,908

FY 2010/11 Depreciation Expense
Demand-Response $75,054
Fixed Route $321,901

County Trips
Based on actual ridership data reported by Sierra Management, during FY 2010/11 County residents consumed 28% of the total Demand-Response passenger trips.
Total Demand-Response Trips 14,076
Total County Trips 3,973
Percentage of County Trips 28%

Demand-Response 1,279,934 X 30% = $383,980
Fixed Route 383,980 Total Payment
- 10,863 Farebox Credit (28% x $38,798) - 90,033 Farebox Credit (30% x $300,110)
$182,351 $293,947
- 61,999 FTA Sec. 5307 Credit (34%) - 99,942 FTA Sec. 5307 Credit (34%)
$120,352 COUNTY LTF $194,005 COUNTY LTF

2000 Census Data
Total Population 59,961
City Population 66%
County Population 34%
SUBJECT: CONSOLIDATED WASTE MANAGEMENT AUTHORITY (CWMA) MEMBERSHIP REPORT

SOURCE: Public Works Department – Field Services Division

COMMENT: Staff was directed at the Council Study Session on September 13, 2011, to send a letter with the Mayor’s signature to the CWMA, requesting that the CWMA Board of Directors consider an alternative member dues structure that would recognize consumption rates and incentivize diversion and recycling efforts.

At the Council meeting of October 4th, staff provided Council with an analysis comparing 1) the current CWMA membership costs with 2) CWMA dues options that recognize consumption and incentivize diversion, as well as 3) terminating its participation in CWMA and “self-performing” the functions and programs currently provided by the CWMA (staff report attached.)

The CWMA Board of Directors met on October 20, 2011, and received the letter from the City of Porterville City Council. CWMA staff presented a study session and report on the “Consideration of an Alternative Membership Contribution Structure.” The current contribution methodology is based on population, and the alternative methodology discussed was based on tonnage. A three-year average of landfilled tons was proposed to minimize volatility. It was recommended and unanimously approved by the Board that staff bring back a resolution at its November Board meeting to change the membership contribution methodology to a landfilled tonnage based formula and that the change be phased in over the next two budgets.

The CWMA Board of Directors met on November 17th and unanimously approved the resolution to change the membership contribution methodology to a landfilled tonnage based formula and that the change be phased in over the next two budgets.

With the CWMA Board agreeing to the Council’s request to modify the membership contribution methodology, staff recommends that we remain members of the CWMA for 2012/2013 and report back to Council when the tonnages calculations and member contributions figures are completed for the 2013/2014 fiscal year, which should be around October 2012.

RECOMMENDATION: That the City Council authorizes:

1. To remain members of the CWMA for 2012/2013; and
2. Staff to report back to Council when the tonnage calculations and member contributions figures are completed for 2013/2014.

ATTACHMENTS:  
1. Staff Report of October 4, 2011
2. CWMA Staff Report of November 17, 2011
3. City Council Request Letter to CWMA
SUBJECT: CONSOLIDATED WASTE MANAGEMENT AUTHORITY MEMBERSHIP

SOURCE: Public Works Department – Field Services Division

COMMENT: At the Study Session on September 13, 2011, Consolidated Waste Management Authority (CWMA) Administrator Anne Magana, presented to Council information regarding the function of the CWMA and the benefit to the City of Porterville to remain a member of the Joint Powers Authority. As a result of the Study Session, the Council provided the following direction:

1. That Staff draft a letter for the Mayor’s signature to the CWMA, requesting that the CWMA Board of Directors consider alternative member dues structure that would recognize consumption rates and incentivize diversion and recycling efforts; and

2. That Staff provide Council an analysis at the October 4th meeting, comparing 1) the current CWMA membership costs with 2) CWMA dues options that recognize consumption and incentive diversion as well as 3) terminating its participation in CWMA and “self-performing” the functions and programs currently provided by the CWMA.

The three options are summarized below:

(1) The current 2011/2012 membership fee for the City of Porterville including Bottle Bill funds is $66,189. The CWMA expenditure budget is $533,761. Porterville’s share is approximately 12.0% of the budget. However, our disposal is only 11.6% of the CWMA member’s total disposal.

(2) The letter requesting the CWMA Board of Directors consider alternative member dues structure was mailed and will be presented to the Board at their October meeting. In the meantime, CWMA Staff (including representatives from all the cities in the CWMA and the county) have already met and began discussions on how a restructure of the dues should be approached.

The majority of the staff agreed that, in concept, this appears to be the equitable and proper thing to do. A staff report will be presented to the board along with the City of Porterville City Council’s letter requesting the consideration of alternative member dues structure.
Preliminary estimates on the reduction to the City of Porterville’s membership fees range from $5,000 to $15,000. There is still some debate about basing the membership calculation on disposal tonnages and/or also including the Household Hazardous Waste (HHW) component in the calculation. Also being considered is a running 3 or 5 year average on the tonnage figures to lessen the impact of fluctuations from year to year. Staff will review the various scenarios with Council at the Council meeting.

(3) If the City were to leave the CWMA, the additional City staff time required to prepare the annual report, coordinate with State staff, track regulatory issues, verify tonnage disposals attributed to the City at the landfill and manage the disposal of the Household Hazardous Waste is estimated at $16,744. The majority of this monetary figure represents the equivalent of one staff person at the landfill one day per week verifying tonnage. In the event significant discrepancies are noted between County assigned tonnage to the City versus City staff documented tonnage, the cost to verify tonnage can be as high as $45,000 to place a full time staff member at the landfill.

Another scenario that the City must entertain if it leaves the JPA is the possibility of paying a different (higher) tipping fee on its solid waste disposed at the County landfill. Presently, the City pays $31 per ton on its solid waste but, it is not inconceivable that the County may explore charging a different “tipping” fee to non JPA members.

In addition, the City would, in all likelihood, lose the benefit afforded CWMA for bulk purchases such as mass printing of education & outreach materials and ordering large quantities of items such as recycling containers. The cost estimate for this category of expenditure is $5,000.

The County has indicated that should the City withdraw from the CWMA, the County in all likelihood will want to negotiate to recover the cost of the Construction & Demolition (C&D) program at Tea Pot Dome landfill. It is possible that the City will experience a rate increase for C&D at the landfill or a limitation in the accepted tonnage of C&D. Staff estimated the cost of C&D at the current subsidy rate for a cost of $20,565.

The cost of the HHW program is also unknown until negotiations with the County are completed. The City may be responsible for the cost of disposal of materials collected at our HHW site. The HHW cost is estimated at $18,000. This assumption is based on the City having to pay for the mobile events in our area as well as our own center’s cost. The total estimated cost to the City if we leave the CWMA would be $60,309. If the City were to leave the
CWMA, notification must be made by December 31, 2011, in order to terminate our membership in the JPA by July 1, 2012.

Staff recommends that Council select Option # 2 and work with the CWMA to develop an alternative membership dues structure that recognizes consumption and incentives diversion.

RECOMMENDATION: That the Council:

1) Direct City Staff to work with the CWMA to develop an alternative membership dues structure that recognizes consumption and incentives diversion; and

2) Report back to Council with CWMA Board's response at the first available City Council meeting.
MEMO

November 10, 2011

Memo To: Consolidated Waste Management Authority Board

From: CWMA Senior Staff

Subject: Consideration of an Alternate Membership Contribution Structure

RECOMMENDATION
The Consolidated Waste Management Authority Senior Staff recommends that the Board adopt resolution 2011-2 changing the annual budget allocation to member agencies from a population base to a three-year-averaged landfilled tonnage base.

DISCUSSION
Consolidated Waste Management Authority is in receipt of a formal request from the City of Porterville City Council asking that the CWMA Board consider modifying the membership contribution structure from the current population-base to a landfilled-tonnage-base.

At the CWMA Study Session on October 20, 2011, the Board instructed Senior Staff to modify the calculations and allocate the membership dues based on a percentage of the total landfilled tons. To minimize tonnage volatility, the proposed fee would be based on a three-year average of landfilled tons. The three-year average will include the years ending two years prior to the budget year. For example, the three year average tonnage amounts for calculating the 2012-13 budget year would be the 2010, 2009, and 2008 years. This is because the prior year’s data will not be available at budget time, so the years used for averaging will begin two years in arrears. The contribution would also be phased in over two years to minimize the fee increase impact on those members who will have larger contributions due to the new distribution basis.
Current Membership Calculations
Resolution 2001-02 established the Authority’s annual budget and its distribution to its members based on their percentage of the Authority’s population. For Fiscal Year 2011-12 the annual budget amount of $433,840 was distributed as shown in Table 1.

<table>
<thead>
<tr>
<th>MEMBERS</th>
<th>MEMBER CONTRIBUTIONS (Based on $433,840)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dinuba</td>
<td>$21,243</td>
</tr>
<tr>
<td>Farmersville</td>
<td>$10,774</td>
</tr>
<tr>
<td>Milpitas</td>
<td>$52,071</td>
</tr>
<tr>
<td>Porterville</td>
<td>$123,706</td>
</tr>
<tr>
<td>Visalia</td>
<td></td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td><strong>$433,840</strong></td>
</tr>
</tbody>
</table>

Fiscal Year 2012-13 (phase in year)
The dues for 2012-13 would be established by multiplying the variance between the current population-based allocation and a three-year average (2010, 2009, and 2008) of landfill tons, by fifty percent (50%) then adding or subtracting the difference to the current population-based rate. If the budgeted amount ($433,840) and percentage of landfilled tons distribution remained the same as fiscal year 2011-12, the membership would be distributed as shown in Table 2.

<table>
<thead>
<tr>
<th>CONTRIBUTION</th>
<th>CONTRIBUTION</th>
<th>DIFFERENCE BETWEEN POPULATION &amp; TONS</th>
<th>% OF THE DIFFERENCE</th>
<th>EXPENSES MEMBER CONTRIBUTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>$21,243</td>
<td>$24,905</td>
<td>$3,662</td>
<td>$1,831</td>
<td>$23,074</td>
</tr>
<tr>
<td>$10,774</td>
<td>$6,828</td>
<td>($3,946)</td>
<td>($1,973)</td>
<td>$5,801</td>
</tr>
<tr>
<td>$52,071</td>
<td>$49,817</td>
<td>($2,254)</td>
<td>($1,127)</td>
<td>$50,944</td>
</tr>
<tr>
<td>$123,706</td>
<td>$112,570</td>
<td>($11,136)</td>
<td>($5,568)</td>
<td>$118,138</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td><strong>$433,840</strong></td>
<td><strong>$0</strong></td>
<td><strong>$0</strong></td>
<td><strong>$433,840</strong></td>
</tr>
</tbody>
</table>
Fiscal Year 2013-14

Fiscal Year 2013-14 and each year thereafter, the Authority's budget would be allocated to each member agency based on the prior three-year average of the landfilled tons. The three years that would be averaged for the 2013-14 budget calculation are 2011, 2010, and 2009.

Table 3 below is an example of how the 2013-14 (and following years) membership contribution would be dispersed if the budgeted amount ($433,840) and percentage of the three-year averaged (2010, 2009, and 2008) landfilled tons distribution remain the same as FY 2011-12.

<table>
<thead>
<tr>
<th>Proposed Members Contribution for Fiscal Year 2013-14</th>
<th>Average 3 Years Total Landfilled Tons</th>
<th>Percent of Landfilled Tons</th>
<th>Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>18,612</td>
<td>5.74%</td>
<td>$24,905</td>
</tr>
<tr>
<td></td>
<td>5,103</td>
<td>1.57%</td>
<td>$6,828</td>
</tr>
<tr>
<td></td>
<td>37,229</td>
<td>11.48%</td>
<td>$49,817</td>
</tr>
<tr>
<td></td>
<td>84,124</td>
<td>25.95%</td>
<td>$112,570</td>
</tr>
<tr>
<td></td>
<td>224,229</td>
<td>0.0%</td>
<td>$15,410</td>
</tr>
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Staff recommends this change as a three-year averaged landfill tonnage base is a more reasonable and fair method of allocating member contributions to the individual jurisdictions.
September 20, 2011

Consolidated Waste Management Authority (CWMA),
Ms. Anne Magaña, Administrator
336 N. Ben Maddox Way
Visalia, California 93292

RE: Request for Consideration of Member Agency Dues Formula Alternatives

Dear Ms. Magaña:

Thank you for your presentation to the Porterville City Council at its recent Study Session regarding the programs, and the City's participation in, the Consolidated Waste Management Authority (CWMA). Please accept this written correspondence as a formal request by the City of Porterville for the CWMA Board of Directors, at its next regular meeting on Thursday, October 21, 2011, to consider alternative member agency dues structure(s) that would recognize individual agency consumption rates and seek to incentivize diversion and ongoing recycling efforts, in lieu of the current singular population-based dues formula.

Thank you for your time and CWMA's consideration of this request by the City of Porterville, and please contact the City Manager's Office at (559)782-7466 should you have any questions and/or if we can be of any further assistance.

Sincerely,

[Signature]

Ronald L. Irish, Mayor
COUNCIL AGENDA: DECEMBER 7, 2011

SUBJECT: SETTING THE PUBLIC HEARING FOR LIBRARY FINES AND COLLECTION PROCEDURES

SOURCE: PARKS AND LEISURE SERVICES DEPARTMENT

COMMENT: Staff was informed by the collection agency utilized by the City that for the first time the agency was asked by the court to produce documentation verifying the library’s authority to levy and collect fines. In an attempt to resolve this issue staff searched in City archives and, unfortunately, supporting documentation could not be located.

Staff recognized the opportunity to rectify this issue and has presented information to the Library and Literacy Commission to review current practices and to endorse recommendations to make adjustments to fines and collection procedures.

RECOMMENDATION: That the City Council set December 20, 2011, as the date for the public hearing to consider official adoption of library fines and collection procedures using the appropriate method of public notifications.
COUNCIL AGENDA – December 7, 2011

SUBJECT: AMENDMENT TO EMPLOYEE PAY AND BENEFIT PLAN – FIRE OFFICER SERIES

SOURCE: ADMINISTRATIVE SERVICES/HUMAN RESOURCES

COMMENT: Within the scope of the Meyers-Milias-Brown Act, City representatives have concluded labor negotiations with the Fire Officer Series (FOS). City representatives and FOS have reached an agreement, and a written comprehensive Memorandum of Understanding (M.O.U.) has been executed restating current benefits as well as amendments pertaining to wages, benefits and working conditions.

City Council acceptance and approval of an executed M.O.U. is most commonly demonstrated by Council authorization to change or amend, when applicable, those documents as are necessarily known to implement the points of agreement contained in the M.O.U.

RECOMMENDATION: That the City Council approve the attached draft resolution amending the Employee Pay and Benefit Plan.

Attachment: Draft Resolution
RESOLUTION NO. ________-2011

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF PORTERVILLE AMENDING THE EMPLOYEE PAY AND BENEFIT PLAN

WHEREAS, the City Council has determined and reiterated that an Employee Pay and Benefit Plan, Classification Plan, Personnel System Rules and Regulations, Health Plan and Retirement Plan are essential for the proper administration of the City’s affairs, including employee recruitment and retention, and for proper supervision of City Employees; and

WHEREAS, the City Council recognizes the necessity of amending and/or changing the contents of such plans and regulations from time to time, and of executing instruments to implement and to keep the provisions thereof current, and to maintain the relevancy of the same and;

WHEREAS, there has been concurrence on a Memorandum of Understanding with the Fire Officer Series for the period from July 1, 2011, until June 30, 2014, covering provisions to amend the Employee Pay and Benefit Plan, as they relate to employees holding positions represented by such recognized employee organization.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Porterville that the Employee Pay and Benefit Plan, for employees holding positions represented by the aforementioned recognized employee organization, is hereby amended as follows:

I. TERM OF MEMORANDUM OF UNDERSTANDING

Thirty-six (36) months. i.e., from July 1, 2011, until June 30, 2014.
II. CALIFORNIA PUBLIC EMPLOYEES RETIREMENT SYSTEM (CalPERS)

Effective 07-01-11, the City’s contribution rate for the Public Safety group will increase from 25.893% to 30.382%. To minimize the current financial impact to the City and potential impacts in the future, the employees agree to share in the cost of increases in the CalPERS employer’s contribution rate as follows:

FY 2011/2012
Effective 12-01-11, Fire Officer Series employees shall pay one percent (1%) of the employer contribution rate for FY 2011/2012 which shall be determined according to the employee’s base salary.

Effective 03-01-12, Fire Officer Series employees shall pay an additional one percent (1%) of the employer contribution rate for FY 2011/2012 which shall be determined according to the employee’s base salary.

FY 2012/2013
Effective 07-01-12, Fire Officer Series employees shall pay fifty percent (50%) of the PERS employer contribution rate increase for FY 2012/2013; however, said employee’s share shall not exceed one percent (1%) of the total increase for FY 2012/2013.

FY 2013/2014
Effective 07-01-13, Fire Officer Series shall pay fifty percent (50%) of the PERS employer contribution rate increase for FY 2013/2014. In event that said increase exceeds a total of three percent (3%), or one and one-half percent (1.5%) for the employee’s share of the increase, FOS shall have the right to re-open negotiations on this item.

In the event the employer contribution rates decrease for FY 2012/2013 and/or FY 2013/2014, the salary deduction percentages outlined herein shall decrease accordingly to reflect those rate percentage decreases.

III. SALARIES
Fire Officer Series employees shall receive a five percent (5%) salary increase effective 01-01-14, retroactively paid back to 07-01-13. The City shall have the right to re-open negotiations on this item if revenues, (i.e. sales tax, property tax, users utility tax), have not significantly increased.

IV. TRAINING ALLOWANCE
Effective 07-01-11, or as soon thereafter as possible, the training allowance for Fire Officer Series employees shall increase by $50.00 per year for fire-related training approved by the Department Head. (No training expenses will be paid for classes taken to attain an A.A. or A.S. degree to be eligible for educational incentive compensation).
V. PROFESSIONAL DEVELOPMENT
Effective 07-01-11, Fire Officer Series employees will be granted forty (40) hours of classroom training (seat time) per calendar year to attend fire-related courses provided no overtime is incurred, functional positions are filled and current level of service is delivered. At the discretion of the Department Head, employees may adjust their work schedules to attend fire-related training.

VI. STAFFING
During the term of this memorandum of understanding the City agrees to maintain the position classification and salary range of all members represented by the Fire Officer Series.

VII. SPECIALIZATION PAY
Effective 07-01-11, or as soon thereafter as possible, whenever a Fire Officer Series employee is permanently assigned to an administrative staff position working a forty (40) hour work week, the employee shall receive an additional 7 1/2 % salary increase.

Effective 07-01-11, or as soon thereafter as possible, whenever a shift officer is temporarily reassigned (does not apply to a light duty and/or modified duty assignment) to a forty (40) hour work week that exceeds (60) calendar days, the employee shall receive an increase in pay equivalent to their previous Fair Labor Standards Act rate of compensation.

VIII. SICK LEAVE
An absence or absences totaling not more than 48 hours of accrued and available sick leave per calendar year for employees other than Fire Shift personnel, and 67.2 hours for Fire Shift personnel, to attend to an illness, whether requiring hospitalization or not, of a child, parent, spouse or domestic partner of the employee. In no event can an employee use more paid sick leave than he/she has accrued. For the purpose of this benefit, “child” means a biological, foster, or adopted child, a stepchild, a legal ward, or a child of a person standing in loco parentis. “Parent” means a biological, foster, or adoptive parent, a stepparent, or a legal guardian.

IX. TUITION REIMBURSEMENT
Effective 10-01-11, or as soon thereafter as possible, the City agrees to amend the Administrative Policy, IV-B-2 Employee Training for employees represented by FOS, to wit:

Mutual Benefit Training: Training of generally equal benefits to the City and the employee for course work applied toward a Bachelor’s or Master’s degree related to the employee’s present position or possible promotion within the City. City participation to consist of full reimbursement for tuition, registration costs, for any class(es) or course(s) to the equivalent of Fresno State University tuition (lecture course) for six (6) units or less per school semester (and two semesters per fiscal year), or equivalent quarter units, per employee. A semester will be calculated by the classes successfully completed between January to June (Spring) and July to December (Fall).
X. STRATEGIC RETIREMENT ADVISORS
Effective 10-1-11, or as soon thereafter as possible, the City will contract with Strategic Retirement Advisors, LLC to provide employees represented by FOS with an additional investment advisor vendor.

XI. STATEMENT OF CONTINUING BENEFITS AND WORKING CONDITIONS

Benefits and working conditions as were previously agreed upon through the Meet and Confer process, and subsequently approved and implemented by appropriate authority shall, unless herein expressly modified or eliminated, remain in effect until such time as they are subsequently modified or eliminated through the Meet and Confer process and similarly approved by appropriate authority.

BE IT FURTHER RESOLVED that the Mayor of the City of Porterville is hereby authorized to execute those documents as are necessary to implement the provisions hereof.

________________________________________
Ronald L. Irish, Mayor

ATTEST:

John D. Lollis, City Clerk

By __________________________
Patrice Hildreth, Chief Deputy City Clerk
SUBJECT: REVIEW OF LOCAL EMERGENCY STATUS

SOURCE: Administration

COMMENT: In accordance with the City Council's Resolution of Local Emergency adopted on December 21, 2010, and pursuant to Article 14, Section 8690 of the California Emergency Services Act, the Council must review the status of its local emergency at every regularly scheduled meeting and make a determination whether to continue or terminate the local emergency declaration.

Since its last review on November 15, 2011, City staff has continued its coordination with both State and Federal representatives in having made claims for reimbursement for public areas reported as suffering flood damage. An estimated total of $361,750 in damage repair projects were defined and accepted by both State (CEMA) and Federal (FEMA) emergency agencies, which after final FEMA administrative review, a total of approximately $270,000 was approved. All repair projects are to be completed by no later than July 2012.

As was previously reported, staff made application for almost $2 million in State Office of Emergency Services (OES) grant funds, which would provide financial assistance for mitigating repetitive flooding conditions. Considering the preliminary flood prevention measures previously presented to the Council, staff evaluated the grant application criteria, and made application for mitigation projects, specifically focusing on Downtown, Murry Park, and Zalud Park projects. Staff is pleased to report that its proposed grant-funded projects successfully passed initial screening, with staff having also attended several days of required training in preparation for administering the grant funds.

RECOMMENDATION: That the Council:
1. Receive the status report and review of the designated local emergency; and
2. Pursuant to the requirements of Article 14, Section 8690 of the California Emergency Services Act, determine that a need exists to continue said local emergency designation.

ATTACHMENT: None
CITY COUNCIL AGENDA: DECEMBER 7, 2011

TITLE: PUBLIC HEARING TO APPROVE REVISIONS TO THE ZONING MAP

SOURCE: COMMUNITY DEVELOPMENT DEPARTMENT—PLANNING DIVISION

BACKGROUND: On October 25, 2011, the City Council held a study session to review needed revisions to the Zoning Map in preparation for this public hearing. At the study session staff explained the reasons why approximately 550 parcels on the Zoning Map have to be amended. The overarching purpose of the Zoning Map changes is to make the Zoning Map consistent with the General Plan Land Use Diagram. Particular reasons for this are summarized below:

1. The General Plan Land Use Diagram is not parcel specific, and zoning which is usually directly correlated with a General Plan Land Use designation was applied to the Zoning Map as if it was parcel specific.

2. Due to the length of time taken to prepare and adopt the General Plan and, subsequently, the Development Ordinance, many assessor parcel numbers or parcel configurations had changed. Since the City’s parcel specific Zoning Map is based on assessor parcel information, some changes in the parcels are not displayed accurately on the Zoning Map.

3. Some areas of the city that have been zoned are created from polygons rather than assessor parcel numbers where the classifications conform to property lines. Several of these polygons were not accurately applied to the Zoning Map.

4. Some parcels were simply not assigned the most appropriate zoning for the use that was occurring on the land or the use as designated on the General Plan Land Use Diagram.

The needed changes to the map as identified above were not readily apparent and have been identified through the course of implementing the Zoning Map. Reviewing the zoning classification on a parcel by parcel basis through the use of the City’s Geographic Information System (GIS) has resulted in the proposed changes.

The 550 parcels to be changed are owned by about 360 property owners, all of which were mailed notice of this public hearing and the study session. A one-eighth page size display ad was also published in the newspaper as well as the usual public hearing notice. Of all of the letters sent to the public, the City received only one written response from a property owner who was not satisfied with the new zoning being proposed by staff. See attached letter that was previously sent to Council Members regarding property on South Villa Street.

All Council Members except Brian Ward were shown to have a conflict of interest in at least one property that is subject to these rezonings either through the direct ownership of the parcel or owning a business or personal interest in a property within 500 feet of a

DD 2N APPROPRIATED/FUNDED N/A CM ITEM NO. 11
property proposed to be changed. In order to avoid a conflict of interest, several ordinances have been prepared. In an effort to address the identified conflicts, staff has proposed the changes in the form of five separate ordinances. Four of the ordinances identify properties and proposed zoning where a particular Council Member has a conflict. As such, that Council Member would recuse himself and the remainder of the Council would consider the proposed changes. This would follow suit through the four ordinances. The fifth ordinance includes the majority of the properties - those without any identified conflicts of interest, and can be considered and acted upon by the entire Council.

RECOMMENDATION: That the City Council conduct a public hearing, and:

1. A. Receive input regarding approval of the revisions to the Zoning Map as depicted on Exhibit A-1; and
   B. Approve the proposed ordinance, give first reading, waive further reading and order the ordinance to print.

2. A. Receive input regarding approval of the revisions to the Zoning Map as depicted on Exhibit A-2; and
   B. Approve the proposed ordinance, give first reading, waive further reading and order the ordinance to print.

3. A. Receive input regarding approval of the revisions to the Zoning Map as depicted on Exhibit A-3; and
   B. Approve the proposed ordinance, give first reading, waive further reading and order the ordinance to print.

4. A. Receive input regarding approval of the revisions to the Zoning Map as depicted on Exhibit A-4; and
   B. Approve the proposed ordinance, give first reading, waive further reading and order the ordinance to print.

5. A. Receive input regarding approval of the revisions to the Zoning Map as depicted on Exhibit A-5; and
   B. Approve the proposed ordinance, give first reading, waive further reading and order the ordinance to print.

ATTACHMENTS:
1. Draft Ordinance with Exhibit A-1 for the Amended Zoning Map
2. Draft Ordinance with Exhibit A-2 for the Amended Zoning Map
3. Draft Ordinance with Exhibit A-3 for the Amended Zoning Map
4. Draft Ordinance with Exhibit A-4 for the Amended Zoning Map
5. Draft Ordinance with Exhibit A-5 for the Amended Zoning Map
6. Letter from Rodney Martin, 146 South Villa Street
ORDINANCE NO. ____________

AN ORDINANCE OF THE CITY COUNCIL OF THE
CITY OF PORTERVILLE AMENDING THE OFFICIAL ZONING MAP

WHEREAS: On March 4, 2008, the City Council of the City of Porterville adopted a comprehensive General Plan Update and Land Use Diagram that included a vision, goals, policies and land use designations to guide development within the City of Porterville’s Planning Area through the year 2030; and

WHEREAS: On May 4, 2010, the City Council approved the Porterville Development Code, which includes the comprehensive Zoning Map that implements the General Plan and provides clear standards and specific locations where various types of future development may occur; and

WHEREAS: The Development Code is the key policy tool that implements the General Plan; and

WHEREAS: On October 25, 2011, the City Council held a study session to review revisions to the Zoning Map which are necessary to achieve greater consistency with the General Plan Land Use Diagram; and

WHEREAS: A public hearing was held before the City Council on December 7, 2011, pursuant to the requirements of the Planning and Zoning Law of the State of California and the Porterville Development Ordinance; and

WHEREAS: It has been determined that no further environmental review pursuant to the California Environmental Quality Act (CEQA) is necessary because this project is an implementation measure of the adopted General Plan. An addendum to the Porterville General Plan Final Environmental Impact Report was prepared when the Comprehensive Development Code was adopted in May 2010, and it was determined that the project does not contain changes and/or additional details that warrant a Subsequent or Supplemental EIR as described in Section 15162 and 15163 of the California Environmental Quality Act Guidelines.

NOW, THEREFORE, BE IT ORDAINED: That the City Council of the City of Porterville does hereby amend the Official Zoning Map as adopted by Ordinance No. 1764 by changing the zoning shown on the parcels on the attached Exhibit A-1.

This ordinance shall be in full force and effect thirty (30) days from and after its publication and passage.

PASSED APPROVED AND ADOPTED this _____ day of __________, 2011.

_________________________
Ronald L. Irish, Mayor
ATTEST:

John D. Lollis, City Clerk

By __________________________
Patrice Hildreth, Chief Deputy City Clerk
ORDINANCE NO. __________

AN ORDINANCE OF THE CITY COUNCIL OF THE
CITY OF PORTERVILLE AMENDING THE OFFICIAL ZONING MAP

WHEREAS: On March 4, 2008, the City Council of the City of Porterville adopted a comprehensive General Plan Update and Land Use Diagram that included a vision, goals, policies and land use designations to guide development within the City of Porterville’s Planning Area through the year 2030; and

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WHEREAS: A public hearing was held before the City Council on December 7, 2011, pursuant to the requirements of the Planning and Zoning Law of the State of California and the Porterville Development Ordinance; and

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NOW, THEREFORE, BE IT ORDAINED: That the City Council of the City of Porterville does hereby amend the Official Zoning Map as adopted by Ordinance No. 1764 by changing the zoning shown on the parcels on the attached Exhibit A-2.

This ordinance shall be in full force and effect thirty (30) days from and after its publication and passage.

PASSED APPROVED AND ADOPTED this ____ day of __________, 2011.

__________________________
Ronald L. Irish, Mayor
ATTEST:

John D. Lollis, City Clerk

By __________________________
Patrice Hildreth, Chief Deputy City Clerk
ORDINANCE NO. ____________

AN ORDINANCE OF THE CITY COUNCIL OF THE
CITY OF PORTERVILLE AMENDING THE OFFICIAL ZONING MAP

WHEREAS: On March 4, 2008, the City Council of the City of Porterville adopted a comprehensive General Plan Update and Land Use Diagram that included a vision, goals, policies and land use designations to guide development within the City of Porterville’s Planning Area through the year 2030; and

WHEREAS: On May 4, 2010, the City Council approved the Porterville Development Code, which includes the comprehensive Zoning Map that implements the General Plan and provides clear standards and specific locations where various types of future development may occur; and

WHEREAS: The Development Code is the key policy tool that implements the General Plan; and

WHEREAS: On October 25, 2011, the City Council held a study session to review revisions to the Zoning Map which are necessary to achieve greater consistency with the General Plan Land Use Diagram; and

WHEREAS: A public hearing was held before the City Council on December 7, 2011, pursuant to the requirements of the Planning and Zoning Law of the State of California and the Porterville Development Ordinance; and

WHEREAS: It has been determined that no further environmental review pursuant to the California Environmental Quality Act (CEQA) is necessary because this project is an implementation measure of the adopted General Plan. An addendum to the Porterville General Plan Final Environmental Impact Report was prepared when the Comprehensive Development Code was adopted in May 2010, and it was determined that the project does not contain changes and/or additional details that warrant a Subsequent or Supplemental EIR as described in Section 15162 and 15163 of the California Environmental Quality Act Guidelines.

NOW, THEREFORE, BE IT ORDAINED: That the City Council of the City of Porterville does hereby amend the Official Zoning Map as adopted by Ordinance No. 1764 by changing the zoning shown on the parcels on the attached Exhibit A-3.

This ordinance shall be in full force and effect thirty (30) days from and after its publication and passage.

PASSED APPROVED AND ADOPTED this _____ day of __________, 2011.

__________________________________________
Ronald L. Irish, Mayor
ATTEST:

John D. Lollis, City Clerk

By __________________________
Patrice Hildreth, Chief Deputy City Clerk
ORDINANCE NO. ____________

AN ORDINANCE OF THE CITY COUNCIL OF THE
CITY OF PORTERVILLE AMENDING THE OFFICIAL ZONING MAP

WHEREAS: On March 4, 2008, the City Council of the City of Porterville adopted a
comprehensive General Plan Update and Land Use Diagram that included a vision, goals,
policies and land use designations to guide development within the City of Porterville’s Planning
Area through the year 2030; and

WHEREAS: On May 4, 2010, the City Council approved the Porterville Development
Code, which includes the comprehensive Zoning Map that implements the General Plan and
provides clear standards and specific locations where various types of future development may
occur; and

WHEREAS: The Development Code is the key policy tool that implements the General
Plan; and

WHEREAS: On October 25, 2011, the City Council held a study session to review
revisions to the Zoning Map which are necessary to achieve greater consistency with the General
Plan Land Use Diagram; and

WHEREAS: A public hearing was held before the City Council on December 7, 2011,
pursuant to the requirements of the Planning and Zoning Law of the State of California and the
Porterville Development Ordinance; and

WHEREAS: It has been determined that no further environmental review pursuant to
the California Environmental Quality Act (CEQA) is necessary because this project is an
implementation measure of the adopted General Plan. An addendum to the Porterville General
Plan Final Environmental Impact Report was prepared when the Comprehensive Development
Code was adopted in May 2010, and it was determined that the project does not contain changes
and/or additional details that warrant a Subsequent or Supplemental EIR as described in Section
15162 and 15163 of the California Environmental Quality Act Guidelines.

NOW, THEREFORE, BE IT ORDAINED: That the City Council of the City of
Porterville does hereby amend the Official Zoning Map as adopted by Ordinance No. 1764 by
changing the zoning shown on the parcels on the attached Exhibit A-4.

This ordinance shall be in full force and effect thirty (30) days from and after its publication and
passage.

PASSED APPROVED AND ADOPTED this _____ day of __________, 2011.

____________________________________
Ronald L. Irish, Mayor
ATTEST:

John D. Lollis, City Clerk

By ____________________________
Patrice Hildreth, Chief Deputy City Clerk
ORDINANCE NO. ____________

AN ORDINANCE OF THE CITY COUNCIL OF THE
CITY OF PORTERVILLE AMENDING THE OFFICIAL ZONING MAP

WHEREAS: On March 4, 2008, the City Council of the City of Porterville adopted a
comprehensive General Plan Update and Land Use Diagram that included a vision, goals,
policies and land use designations to guide development within the City of Porterville’s Planning
Area through the year 2030; and

WHEREAS: On May 4, 2010, the City Council approved the Porterville Development
Code, which includes the comprehensive Zoning Map that implements the General Plan and
provides clear standards and specific locations where various types of future development may
occur; and

WHEREAS: The Development Code is the key policy tool that implements the General
Plan; and

WHEREAS: On October 25, 2011, the City Council held a study session to review
revisions to the Zoning Map which are necessary to achieve greater consistency with the General
Plan Land Use Diagram; and

WHEREAS: A public hearing was held before the City Council on December 7, 2011,
pursuant to the requirements of the Planning and Zoning Law of the State of California and the
Porterville Development Ordinance; and

WHEREAS: It has been determined that no further environmental review pursuant to
the California Environmental Quality Act (CEQA) is necessary because this project is an
implementation measure of the adopted General Plan. An addendum to the Porterville General
Plan Final Environmental Impact Report was prepared when the Comprehensive Development
Code was adopted in May 2010, and it was determined that the project does not contain changes
and/or additional details that warrant a Subsequent or Supplemental EIR as described in Section
15162 and 15163 of the California Environmental Quality Act Guidelines.

NOW, THEREFORE, BE IT ORDAINED: That the City Council of the City of
Porterville does hereby amend the Official Zoning Map as adopted by Ordinance No. 1764 by
changing the zoning shown on the parcels on the attached Exhibit A-5.

This ordinance shall be in full force and effect thirty (30) days from and after its publication and
passage.

PASSED APPROVED AND ADOPTED this ____ day of ____________, 2011.

Ronald L. Irish, Mayor
ATTEST:

John D. Lollis, City Clerk

By ______________________
Patrice Hildreth, Chief Deputy City Clerk
Rodney Martin  
146 South Villa  
Porterville, Ca 93257  
559-310-6412  
rodney@rodneymartin.com  

November 7, 2011  

MR. JOHN LOLLIS  
CITY MANAGER  
CITY OF PORTERVILLE  
PORTERVILLE, CA. 93257  

Re: Zoning- Taking & Remedy  

Dear Mr. Lollis:  

The purpose of this letter is to submit my demand for corrective action regarding the zoning “errors” which occurred in the City’s 2010 General Plan process.  

My property was zoned R-2 when I purchased it. This was a major reason for my purchasing the property. I along with many others learned on October 14, 2011 that my property zoning had been impacted by what has been described as an “error(s)” during the 2010 General Plan process. This resulted in my property now being zoned “Open Space-Public”. This error as it relates to my property is an obvious taking that has devaluation implications.  

It was far too difficult to learn how, when and why this occurred, but I eventually confirmed my theory after discussions with Councilmembers and City Staff.  

During my meeting with City Staff and in my discussions with Councilmembes, I have made it clear that I understand that the City’s new General Plan has no R-2 designation, but there is a City equivalent and that is what I seek as a cure for the taking that occurred.  

I was somewhat surprised to learn in my meeting with City Staff that it is Staff’s desire to NOT replace what was taken with the equivalent new City designation. During my meeting with City Planning Staff, it was proposed to me that the City’s proposed cure to the taking would be to apply the new City RS2 zoning to my property and other previously zoned R-2 properties in my neighborhood. RS2 is equivalent to a prior R-1 Zoning designation and NOT the R-2 zoning which was taken. City Staff made an argument for this position based on City Staff’s desired land use rationale, an argument that was both logical and compelling (from the City’s point of view) but has an odor of using the error rather than correcting the error.  

My understanding, based on my meeting with City Staff, is the new equivalent City Zoning to my prior R-2 Zoning is RM2 or RR2, what was told to me verbally does not match the hand out I was given. It is my position and demand that this zoning designation be applied to my property to correct the “error” that resulted in the taking that impacted mine and other’s property.
City Staff's temptation or desire to use this error to impose what it views as highest and best use zoning and to head off potential land use concerns, are insufficient to not replace what was taken. I might add the Staff's land use concerns as expressed to me are non-issues and could be addressed via other regulatory means should they ever even materialize. The City's or Consultant's error, if this was an error by a consultant I would hope an errors & omissions claim is filed, resulted in a taking, and the City Staff's proposed fix, as outlined to me in my meeting with them is yet another taking and both are actionable. The simple solution is for the City to correct the error, replace what was taken and avoid the temptation to exploit the "error".

Sincerely,

Rodney Martin

Cc. Brad Dunlap, Director, Community Development
Mayor Ron Irish
Members of the City Council
Counsel
CITY COUNCIL AGENDA: DECEMBER 7, 2011

PUBLIC HEARING

TITLE: CONDITIONAL USE PERMIT PRC-2011-23-C - PROPOSED SALE OF ALCOHOLIC BEVERAGES UNDER AN ON-SALE LICENSE IN CONJUNCTION WITH THE SERVING OF MEALS FOR A PROPOSED "DICKIE’S BARBECUE PIT" RESTAURANT TO BE LOCATED AT 73 NORTH MAIN STREET (FORMERLY "SCREAMING MOOSE")

SOURCE: COMMUNITY DEVELOPMENT DEPARTMENT - PLANNING DIVISION

COMMENT: The applicant is requesting approval of a Conditional Use Permit (CUP) to allow the sale of beer and wine under an on-sale license. The sale of alcohol will be in conjunction with the serving of meals for a proposed restaurant to be located at 73 North Main Street in a DR-N (Downtown Retail North) Zone District. Section 301.03 of the Porterville Development Ordinance requires approval of a CUP for any use involving the sale of alcoholic beverages.

The restaurant design incorporates a small bar area adjacent to the dining area. The Type 41 alcohol license permits the serving of alcohol in conjunction with meals and does not permit the operation of a separate bar. In addition, the applicant is not proposing any live entertainment, which would require subsequent Council approval prior to offering live entertainment. The proposed hours of operation will be seven (7) days a week 9:00am-2:00am.

The subject site is located in Census Tract 38.02. The California Department of Alcoholic Beverage Control (ABC) has indicated that Census Tract 38.02 can accommodate up to four (4) on-sale licenses. At present, ten (10) on-sale licenses exist. Due to the overconcentration of alcohol licenses, a letter approval of a finding of Public Convenience or Necessity for the on-sale license is required by the ABC.

RECOMMENDATION: That the City Council:

1. Adopt the draft resolution approving Conditional Use Permit PRC-2011-23-C; and
2. Authorize the Mayor to sign the Letter of Public Convenience or Necessity.

ATTACHMENTS:

1. Complete Staff Report
2. Draft Resolution
3. Draft Letter of Public Convenience or Necessity
4. ABC Census Tract 38.02 On-Sale Alcohol Licenses Map
5. ABC active license query print out of Census Tract 38.02
CITY COUNCIL AGENDA: DECEMBER 7, 2011

PUBLIC HEARING - STAFF REPORT

TITLE: CONDITIONAL USE PERMIT PRC-2011-23-C

APPLICANTS: Hillman Building Designs (Agent) Ed Phillips (Business Owner)
34583 Hwy 190 998 Highland Drive
Springville, CA 93265 Porterville, CA 93257

SPECIFIC REQUEST: The applicants are requesting approval of a Conditional Use Permit to allow
the sale of beer and wine under a Type 41 (restaurant) on-sale alcohol license in conjunction with
the serving of meals for a proposed restaurant (Dickie’s Barbeque Pit) to be located at 73 North Main
Street in a DR-N (Downtown Retail North) District.

PROJECT DETAILS: The proposed hours of operation will be seven (7) days a week 9:00am-
2:00am.

The applicants anticipate a seating capacity of 143± patrons and employing 3-5± people. In brief, the
proposed restaurant will feature a fast paced, seat yourself restaurant featuring signature barbeque
dishes including sandwiches, plates, bakers (potatoes) and salads. In addition to food items, the
restaurant will feature a small bar serving beer and wine. The Type 41 alcohol license permits the
serving of alcohol in conjunction with meals and does not permit the operation of a separate bar. In
addition, the applicant is not proposing any live entertainment, which would require subsequent
Council approval prior to offering live entertainment. The restaurant is not a sports bar, although
there will be wall mounted televisions showing different programming events.

In additional to the interior seating area, an outdoor area enclosed by a wrought iron fence and
covered by a roof fronting on Main Street will be provided to allow for outdoor seating. Access to
this area will be from the inside of the building only.

The subject site is located in Census Tract 38.02. The California Department of Alcoholic Beverage
Control has indicated that Census Tract 38.02 can accommodate up to four (4) on-sale licenses
without being deemed “over concentrated.” At present, ten (10) on-sale licenses exist. As a result of
this, a letter of Public Convenience or Necessity, signed by the Mayor, is required from the ABC.

GENERAL PLAN AND LAND USE/ZONING DESIGNATION:

The General Plan designation for the site is Downtown Retail uses and consistently zoned
Downtown Retail North (DR-N) District on the City’s Zoning Map.
SURROUNDING AREA ZONING AND LAND USE:

NORTH: City DR-N – Downtown Commercial Businesses
SOUTH: City DR-N & DR-S – Downtown Commercial Businesses
EAST: City DR-N – Bank of Sierra
WEST: City DR-D – “D” Street Commercial District

STAFF ANALYSIS: On October 26, 2011, the Project Review Committee reviewed the application request. Section 301.03 of the Porterville Zoning Ordinance requires Conditional Use Permit approval for any use involving the sale of alcoholic beverages under an on-sale or off-sale license.

Restaurants are permitted by right in the Downtown Retail North District. If the Council denies the conditional use permit, the applicants could still operate the proposed restaurant absent the sale of beer and wine. Approval of the request would result in the applicants being conditionally allowed to sell beer and wine under an on-sale license in conjunction with the proposed restaurant.

ENVIRONMENTAL: The project is Categorically Exempt pursuant to Section 15323, Class 23 of the CEQA Guidelines - (Normal Operations of Facilities for Public Gatherings). Under the Permit Streamlining Act (Section 65950 of the Government Code), the City has 60 days from the date the project was accepted as complete to reach a determination regarding this project.

DATE FILED FOR PROJECT REVIEW COMMITTEE PROCESSING: October 14, 2011

DATE ACCEPTED AS COMPLETE: November 1, 2011

RECOMMENDATION: That the City Council:

1. Adopt the draft resolution approving Conditional Use Permit PRC-2011-23-C; and
2. Authorize the Mayor to sign the Letter of Public Convenience or Necessity.

ATTACHMENTS:

1. Locator Map and interior layout
RESOLUTION NO. ______

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF PORTERVILLE CONTAINING FINDINGS AND CONDITIONS IN SUPPORT OF APPROVAL FOR CONDITIONAL USE PERMIT PRC-2011-23-C TO ALLOW THE SALE OF BEER AND WINE UNDER AN ON-SALE LICENSE IN CONJUNCTION WITH SERVING OF MEALS FOR A PROPOSED RESTAURANT TO BE LOCATED AT 73 NORTH MAIN STREET

WHEREAS: The applicant is requesting approval of Conditional Use Permit PRC 2011-23-C to allow the serving of beer and wine in conjunction with the serving of meals at 73 North Main Street in the DC-N Zone; and

WHEREAS: The City Council of the City of Porterville at its scheduled meeting of December 7, 2011, conducted a public hearing to consider Conditional Use Permit PRC-2011-23-C; and

WHEREAS: The City Council received testimony from all interested parties relative to said Conditional Use Permit; and

WHEREAS: Section 301.03 of the Porterville Development Ordinance requires a conditional use permit approval for any use involving the sale of alcoholic beverages under an on-sale license or off-sale license; and

WHEREAS: The City Council made the following findings:

1. Approval of the conditional use permit will advance the goals and objectives of and is consistent with the policies of the General Plan and any other applicable plan that the City has adopted, as follows:

   LU-G-1 Promote a sustainable, balanced land use pattern that responds to existing needs and future needs of the City.

   LU-G-2 Maintain a well-defined, compact urban form with Downtown as the "heart of the City."

   LU-G-11 Foster strong, visually attractive regional commercial centers with a mix of tenants to serve both local and regional needs.

   LU-G-21 Attract and retain specialty retail and restaurant businesses that will enhance Porterville’s unique character.

   ED-G-5 Retain existing local businesses and foster local start-ups.

   ED-G-7 Create an image for Porterville that will attract and retain economic activity.
The location, size, design, and operating characteristics of the proposed project are consistent with the policies of the General Plan and other applicable plan that the City has adopted.

The General Plan designates the proposed project site as Downtown Retail and the Zoning Map designates the site as Downtown Retail North (DR-N). The proposed project promotes and implements the specific purposes of this Downtown District, including the following purposes as set forth in Section 202.01 of the Development Ordinance and Downtown Design Guidelines:

- Maintain a thriving, vibrant Downtown compatible with surrounding land uses.
- Provide for a range of commercial and retail services that add to a diversified economic base.
- Ensure that potential development and redevelopment is integrated into the Downtown and supports the vitality of the area.

The proposed restaurant and sale of alcoholic beverages is consistent with the previous restaurant use in size, design, and operating characteristics and conforms with all applicable development standards. The use also promotes the goals and purposes listed above.

WHEREAS: That the proposed location of the project and the conditions under which it will be operated or maintained will not be detrimental to the public health, safety, welfare, or materially injurious to properties or improvements in the vicinity. Conditions of approval are included to ensure applicable development standards are met; and

WHEREAS: That pursuant to Section 15323, Class 23, - (Normal Operations of Facilities for Public Gatherings) of the California Environmental Quality Act Guidelines, the Conditional Use Permit to allow the sale of beer and wine under an on-sale license in conjunction with a restaurant in an existing commercial building previously used as a restaurant is Categorically Exempt; and

WHEREAS: The subject site is located in Census Tract 38.02 which allows, according to the Alcoholic Beverage Control, four (4) on-sale licenses. At present, ten (10) on-sale licenses exist in this census tract. As a result of this finding, a Letter of Public Convenience or Necessity will be required to be submitted to the Department of Alcoholic Beverage Control (ABC) for the ABC’s consideration.

NOW, THEREFORE, BE IT RESOLVED: That the City Council of the City of Porterville does hereby approve Conditional Use Permit PRC-2011-23-C subject to the following conditions:

1. Unless a change is approved by the City Council in advance, hours of operation will be as follows: Seven (7) days a week 9:00 a.m. to 2:00 a.m.
2. Any future change in operation which substantially alters the condition or nature of the subject business will require approval by the City Council if such modification involves the sale of alcoholic beverages.

3. No advertising of alcoholic beverages that can be seen from the public right of way is allowed.

4. Upon approval of the Conditional Use Permit, any future violations of regulations of the codes relating to the sales or consumption of alcohol, and/or excessive service calls to the Police Department resulting from the sale of alcohol may result in revocation of the conditional use permit.

5. The conditional use permit shall become null and void if not undertaken and actively and continuously pursued within one (1) year. The Conditional Use Permit will expire when the use ceases to operate for one year or more.

6. Compliance with all applicable development and access laws (both State and Federal) is required.

7. Building sign permits require separate submittal from building and tenant improvement permits.

8. The sale of alcohol shall be in conjunction with the service of meals associated with the restaurant and shall not include the operation of a separate bar.

9. No live entertainment is allowed without first obtaining approval of modification to the conditional use permit.

10. The building design and interior layout shall substantially conform to attached plans (Exhibit 1).

Ronald L. Irish, Mayor

ATTEST:

John D. Lollis, City Clerk

By _____________________________
Patrice Hildreth, Chief Deputy City Clerk
December 7, 2011

California Alcohol Beverage
Control Board
Fresno District Office
3640 East Ashlan
Fresno, CA 93726

Attention Joyce Knodel:

RE:  Dickie’s Barbeque Pit – 73 N. Main Street

Dear Ms. Knodel:

The City Council of the City of Porterville has elected to approve submittal of this letter regarding the public convenience or necessity to be served through issuance of an on-sale beer and wine license in conjunction with serving meals at the Dickie’s Barbeque Pit, located at 73 N. Main Street.

Approval of this letter was based on the following:

1. Per Section 23958.4 of the “Business and Professions Code,” the subject site is located within Census Tract 38.02 which allows four (4) on-sale beer and wine licenses. At present there are ten (10) issued licenses.

2. On December 7, 2011, the City Council conditionally approved Conditional Use Permit PRC2011-23-C (see attached resolution) to allow the on-sale of beer and wine in conjunction with serving meals, located at 73 N. Main Street. As a condition of approval, a Letter of Public Convenience or Necessity was required to be approved by the City Council and signed by the Mayor.

3. In consideration of the above, the City Council determined that public convenience or necessity would be served by the issuance of an on-sale beer and wine license in conjunction with serving meals.

ATTACHMENT
ITEM NO. 3
Further issuance of an on-sale license allowing only beer and wine sales represents a viable economic asset to the community which will contribute tax revenues to the local economy. The majority of the alcohol sales from the Dickie’s Barbeque Pit are to be in small quantities and in conjunction with serving meals.

For these reasons, the City Council of the City of Porterville supports issuance of an on-sale beer and wine license for the Dickie’s Barbeque Pit, located at 73 N. Main Street.

Sincerely,

Ronald L. Irish, Mayor
California Department of Alcoholic Beverage Control
Census Tract 38.02
Type 41 and Type 47 On-Sale Licenses

Legend
1. El Nuevo Mexicali Rest.
2. La Fuente Mexican Rest.
3. Bella Donna Italian Rest.
4. The Cellar
5. Don Vinos Italian Rest.
6. Giovanni's Pizzeria Arcade
7. The Brickhouse
8. The Mecca
9. Poor Richards
10. Elks Lodge

Not to scale
### California Department of Alcoholic Beverage Control

For the County of TULARE - (On-Sale Licenses)  
and Census Tract = 38.02

Report as of 12/1/2011

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For a definition of codes, view our glossary.
COMMENT: California Voters approved Proposition 215, which codified into the California Health and Safety Code the “Compassionate Use Act of 1996.” The stated intent of the Proposition was to enable people in need of cannabis (marijuana) for medical purposes the ability to obtain and use it without fear of criminal prosecution under limited, specific circumstances. In 2003, the State legislature added the “Medical Marijuana Program Act” to the Health and Safety Code (“MMP”). Pursuant to federal law the use, possession, transpiration, and distribution of marijuana was, and still is, illegal. The state statutes provide, among other things, that qualified patients and their primary care givers have limited immunity from prosecution for violation of various violations of the Penal and Health and Safety Code related to marijuana. However, it was unclear at the time whether the State law allowed for “dispensaries” under the Compassionate Use Act.

In November 2007, the City Council approved regulations that 1) effectively prohibited land uses that are inconsistent with local, state, and federal law (by implication prohibiting the location of medical marijuana dispensaries), and 2) provided for regulation of such dispensaries in the event federal law changed.

The current City regulations that would apply if the federal law changes are summarized as follows: Anyone wishing to operate a dispensary shall be required to obtain a special permit. The City limits the number of permits allowed to one for every 25,000 residents. Such permits are for the duration of one year and may be renewed. Background checks and investigations are required. Once permitted, the dispensary must operate pursuant to specific requirements.

In March of this year, we reported to the City Council that there had been several substantial clarifications provided to the law via case law and legislative amendments to the MMP, and that this office recommended that the City review and consider changes to the City’s current regulations in light. The City Council gave direction at that time to review and propose modifications in light of the new developments. Since that report, there have been even more significant clarifications that have been provided and have been incorporated into the discussion below.

As we have noted before, since the passage of Prop. 215, subsequent case law has been less than clear concerning the interplay between the federal and state regulatory schemes. Recent cases have indicated that the Courts are not inclined to find a conflict
between federal and state law with regard to cultivation on medical marijuana (although see below concerning the permitting of dispensaries). Several cases have provided some further guidance, and the State Attorney General and U.S. Attorney have both issued policy statement and/or guidelines concerning these issues, the effect of which has resulted in allowance of a certain level of cultivation and usage by individuals who have complied with the State law. New legislation was passed earlier this year that clarifies the City’s ability to regulate land use associated with medical marijuana related uses, and now a couple cases have been decided (within the last couple months) that confirm the right of the City to restrict, and even prohibit certain medical marijuana uses such as dispensaries. The case law and new legislation is highlighted below.

The end result for the City is a substantial increase in the cultivation and use of cannabis, purportedly for medical purposes, increased complaints related to the growing and cultivation of marijuana, and new public safety concerns and practical difficulties for local law enforcement. Consequently, the Porterville Police Department, in conjunction with the City Attorney and Community Development departments, is proposing regulations that would prohibit medical marijuana dispensaries and collective or cooperative cultivation and processing, and require that cultivation, for personal use only (in accordance with State law), occur within a fully enclosed, secure area, with limitations on the size of the cultivation area.

In coordination with this effort, this office has reviewed the regulations adopted in 2007, and is proposing substantial changes to these regulations due to the additional clarifications that have occurred.

CASE LAW AND LEGISLATIVE SUMMARY

In City of Claremont v. Kruse (2009) 177 Cal.App.4th 1153, the Court upheld the lower court’s determination that operation of a dispensary was a nuisance per se in violation of the City’s municipal code, finding that the Compassionate Use Act does not authorize the operation of a medical marijuana dispensary, nor does it prohibit local governments from regulating dispensaries. The Court also found that the State laws do not compel the establishment of local regulations to accommodate medical marijuana dispensaries.

Cities as well as medical marijuana advocates hoped that Qualified Patients Association v. City of Anaheim (2010) 187 Cal.App.4th 734, would provide a definitive answer to the federal versus state law question. The Court did find that the lower court had erred in concluding, as a matter of law, that federal regulations (Controlled Substances Act) preempt the Compassionate Use Act. However, the Anaheim decision pertained to statutes that imposed purely criminal penalties for operation of a medical marijuana dispensary, and the Court did not address zoning and land use restrictions.

As of January 1, 2011, the Legislature enacted Health and Safety Code Section 11362.768, which provides (per subsection (f)) “Nothing in this section shall prohibit a city, county or city and county from adopting ordinances or policies that further restrict the location or establishment of a medical marijuana cooperative, collective, dispensary,
operator, establishment, or provider.” Per County of Los Angeles v. Martin Hill (2011) Cal. Court of Appeal (2nd Dist.) No. B216432, state law does not confer on qualified patients and caregivers an unfettered right to cultivate or dispense marijuana anywhere they choose. This case did not address outright bans on dispensaries. This case also noted that qualified patients and caregivers are exempt from nuisance abatement actions for collective or cooperative cultivation brought pursuant to State “Red Light” or drug den nuisance abatement statutes (per California Health and Safety Code Section 11570).

In October 2011, the California Court of Appeals for the Second District found that the City of Long Beach’s medical marijuana ordinance, which authorized and permitted but regulated medical marijuana collectives, was preempted by federal law. This case is helpful in that it appears that various collective/cooperative uses may be able to be completely banned; however it muddies the water concerning whether cities may institute a permit process for other uses, such as individual cultivation.

On November 9, 2011, the Fourth District of the California Court of Appeals found that the City of Riverside could ban medical marijuana dispensaries within their borders, and that the State’s medical marijuana laws do not prevent cities and counties from passing regulations on dispensaries, including bans. (The Court specifically found that it agreed with the finding in Qualified Patients Assoc. v. City of Anaheim (discussed above) that federal preemption of state medical marijuana law is not a valid basis for upholding a city’s zoning laws; however the Court found that the State law does preempt local zoning regulations that result in a ban of dispensaries.

Given the new information available since the passage of the City’s local regulations, this office recommends that the City Council modify its current regulations as follows: 1) repeal the provisional medical marijuana dispensary regulations; 2) add regulations to the Development Code making it clear that dispensaries and collective/cooperative cultivation or processing are not permitted within the City; and 3) add provisions to the Development Code regulating cultivation for qualified patient use, requiring, among other things, that cultivation occur indoors.

Attached is a draft ordinance for the Council’s review and comment, which addresses the above issues. This office had originally intended to include a permit process for individuals who wished to cultivate for their own use; however we would recommend that the City at this point refrain from that until further clarification by the California Courts and/or legislators. Also note that some of the sections are still a work in progress; however it is our intent to bring the finalized ordinance back to the City Council for a public hearing and first reading at the next regular City Council Meeting.

RECOMMENDATION: That the City Council consider this report and draft ordinance and provide direction as it deems appropriate.

ATTACHMENTS: Draft Ordinance

\julia\mlkj\Porterville\general\agnmedmarijuan120711.doc
ORDINANCE NO. __________


WHEREAS, the City Council of the City of Porterville, based on recent and ongoing problems related to the local cultivation of medical marijuana, hereby finds that the cultivation, processing and distribution of medical cannabis in the City has caused and is causing ongoing impacts to the community. These impacts include increased crime related to outdoor cultivation occurring on residential lots, damage to buildings containing indoor grows, increases in home invasion robberies and related crimes, and increases in response costs, including code enforcement, building, land use, fire, and police staff time and expenses;

WHEREAS, in November 2007, and in response to the implementation by the State of the Compassionate Use Act of 1996, the Medical Marijuana Program Act (2003) and subsequent case law, the City Council of the City of Porterville adopted Ordinance No. 1734, which amended the City's regulations concerning medical marijuana dispensaries, prohibiting the issuance of business licenses for the purpose of operating medical marijuana dispensaries, but allowing for their regulation in the event federal law changed;

WHEREAS, the City finds that it is in the best interest of the community to prohibit the use of land within the City limits for the purposes of collectively cultivating, processing, or dispensing medical cannabis, and to continue to deny business licenses to applicants desiring to open a medical marijuana dispensary within city limits; and

WHEREAS, recent legislation and case law confirms that the City has the power to regulate individual cultivation, and restrict and even prohibit dispensing of medical cannabis, as well as the collective cultivation and processing of medical cannabis.

THE CITY COUNCIL OF THE CITY OF PORTERVILLE HEREBY ORDAINS as follows:

SECTION 1. The Porterville Municipal Code, Chapter 15, Article I, Section 15-5.1 is hereby amended as follows:

15-5.1: REFUSAL TO ISSUE LICENSE

A. Nothing in this Section shall be deemed to prevent the city council from refusing to grant to any person a license to carry on and conduct any business in the city, when it
shall appear to the city council that such business is, or is reasonably certain to be, carried on in such manner as to be unlawful, immoral or a menace to the health, safety, peace or general welfare of the people of the city, or that the applicant is not a fit or proper person to carry on such business, or of such character and reputation as to render it reasonably certain that such business will be carried on by the applicant in an illegal or immoral manner, or in such manner as to constitute a menace to the health, safety, morals, peace or general welfare of the people of the city, or that the applicant has theretofore been convicted of any crime in connection with, or while engaged in the operation of a similar business in the city, or has been convicted of any crime affecting the moral character of such applicant.

B. The city council shall refuse to issue a business license to any applicant where it is apparent that the issuance of such license would allow for the practice, operation or carrying out of any activity that conflicts with any local, state or federal law. and whereas the concept of medical marijuana dispensaries, which are defined by the California Compassionate Use Act of 1996 and SB 420, directly conflict with federal marijuana laws, all applications for medical marijuana dispensaries shall be denied. Should federal marijuana laws, at any time, be altered or amended to accommodate for the operation of medical dispensaries, Section 15-17 of this Municipal Code shall govern such licenses, but only to the extent that it conforms with all applicable local, state and federal laws.

SECTION 2. Chapter 15, Article VII, Sections 15-85 through 15-105, is hereby repealed.

ARTICLE VII. MEDICAL-MARIJUANA DISPENSARIES

Section:

15-85 Purpose and Intent
15-86 Definitions
15-87 Enforcement of Article
15-88 Medical Marijuana Business Permit Required
15-89 Applications
15-90 Term, Renewals and Fees
15-91 Notifications
15-92 Investigation and Action on Applications
15-93 Grounds for Denial of Permit
15-94 Appeal from Denial
15-95 Suspension or Revocation of Permit
15-96 Judicial Review
15-97 Effect of Denial or Revocation
15-98 Operating Requirements
15-99 Zoning and Development Standards
15-85. Purpose and Intent: Effective Date. It is the purpose and intent of this ordinance to provide direction concerning medical marijuana dispensaries, in the event federal law is altered to accommodate the legal operation of such, in a manner that will promote the health, safety, and general welfare of the residents and businesses within the city. It is not the intent nor effect of this ordinance to restrict or deny qualified patients access to marijuana for medical purpose as intended by the passage of the Compassionate Use Act of 1996 and SB 420 in 2004. Neither is it the intent nor effect of this ordinance to condone or legitimize the use of marijuana. This Article shall not go into effect unless and until and only to the extent federal law changes to permit the legal operation of medical marijuana dispensaries and/or cooperatives.

15-86. Definitions. All definitions set forth in Health & Safety Code sections 11362.5 and 11362.7 et seq., as may be amended, including but not limited to the terms “attending physician”, “person with an identification card”, “serious medical conditions”, shall apply under this Ordinance in addition to the definitions set forth as follows:

“Applicant” means a person who is required to file an application for a permit under this section, including an individual owner, managing partner, officer of a corporation, or any other operator, manager, employee or agent of a Medical Marijuana Business.

“City-Manager” means the City-Manager holding office in the City of Porterville or his or her designee.

“Medical Marijuana” is defined in strict accordance with California Health and Safety Code sections 11362.5, and 11362.7 et seq.

“Medical Marijuana Dispensary” means any facility or location, whether fixed or mobile, where medical marijuana is made available to, distributed by, or distributed to one or more of the following: (1) a qualified patient, (2) a person with an identification card, or (3) a primary caregiver. All three of these terms are defined in strict accordance with California Health and Safety Code sections 11362.5, and 11362.7 et seq. Unless otherwise regulated by this Code or applicable law, a “medical marijuana dispensary” shall not include the following uses: a clinic licensed pursuant to Chapter 1 of Division 2 of the Health and Safety Code, a health care facility licensed pursuant to Chapter 2 of Division 2 of the Health and Safety Code, a residential care facility for persons with chronic life-threatening illness licensed pursuant to Chapter 3.01 of Division 2 of the-
Health and Safety Code, a residential care facility for the elderly licensed pursuant to Chapter 3.2 of Division 2 of the Health and Safety Code, a residential hospice, or a home health agency licensed pursuant to Chapter 8 of Division 2 of the Health and Safety Code, as long as any such use complies strictly with applicable law including, but not limited to, Health and Safety Code sections 11362.5, and 11362.7 et seq.

"Medical-Marijuana-Businesses" means any Medical-Marijuana-Dispensary; any cultivation and/or processing of medical marijuana operations by primary caregivers for three or more qualified patients or persons with identification cards; or collective or cooperative cultivation operations.

"Cultivation of Medical Marijuana" means the growing of medical marijuana for medical purposes as defined in strict accordance with California Health and Safety Code sections 11362.5, and 11362.7 et seq.

"Collective or Cooperative Cultivation" means the association with California of qualified patients, persons with valid identification cards, and designated primary caregivers to cultivate marijuana for medical purposes as defined in strict accordance with California Health and Safety Code sections 11362.5, and 11362.7 et seq.

"Processing of Medical Marijuana" means the harvesting of marijuana or the use of any process or equipment, including but not limited to dehydrators or humidifiers, that may be necessary to convert raw marijuana plants or plant parts into a consumable product.

"Permittee" means the person to whom a Medical-Marijuana-Business-permit is issued.

"Written Recommendation" shall have the same definition as California Health and Safety Code section 11362.7 et seq., and as may be amended.

15-87. Enforcement of Article
The City Manager of the City of Porterville or his/her designee shall have the responsibility and duty of enforcement of this Article.

15-88. Medical-Marijuana Business Permit Required

A. It shall be unlawful for any person to engage in, conduct or carry on, or to permit to be engaged in, conducted or carried on, in or upon any premises in the City of Porterville the operation of a Medical-Marijuana Business unless the person first obtains and continues to maintain in full force and effect a Medical-Marijuana Business permit from the City of Porterville as herein required.

B. A Medical-Marijuana Business shall also be required to apply for and maintain a general City of Porterville business license as a prerequisite to obtaining a permit pursuant to the terms hereof.
C. The total number of permitted medical marijuana dispensaries shall be limited to one dispensary per 25,000 city population. Population shall be determined by the Federal Census Bureau or State Department of Finance. The standard of one dispensary per 25,000 city population may be deviated from upon the submittal of evidence that additional dispensaries are needed to serve the city. Any such evidence shall be approved by the City Council.

15-89. Applications

A. The applicant for a Medical Marijuana Business permit shall submit to the City Manager or designee an application for a permit. The application shall be made under penalty of perjury and shall include the following information:

1. The full name, present address, and telephone number of the applicant;

2. The address to which notice of action on the application is to be mailed;

3. Previous addresses for the past five (5) years immediately prior to the present address of the applicant;

4. Written proof that the applicant is over the age of eighteen (18) years of age;

5. Applicant's height, weight, color of eyes and hair;

6. An identification photograph of the applicant;

7. All business, occupation, or employment of the applicant for the five years immediately preceding the date of the application;

8. The business license history of the applicant, including whether such person, in previously operating in this or another city, county or state under a license has had such license revoked or suspended, the reason therefore, and the business or activity or occupation subsequent to such action of suspension or revocation;

9. The name or names of the person or persons having the management or supervision of applicant's business;

10. Whether the person or persons having the management or supervision of applicant's business have been convicted of a crime(s), the nature of such offense(s), and the sentence(s) received therefore;

11. The name of all employees, independent contractors, and other persons who will work at the proposed Medical Marijuana Business;

12. The proposed security arrangements for ensuring the safety of persons, safe and secure storage of the marijuana, and to protect the premises from theft-
which shall be kept confidential and not disclosed to the public as the public
interest is served in preserving the confidentiality of such security arrangements;

13. A sketch or diagram showing the interior configuration of the premises,
including a statement of the total floor area occupied by the proposed Medical
Marijuana Business. The sketch or diagram need not be professionally prepared,
but must be drawn with marked dimensions of the interior of the premises;

14. A current and accurate straight-line drawing depicting the building and/or the-
portion thereof to be occupied by the proposed Medical Marijuana Business;

15. Authorization for the City of Porterville, its agents and employees to seek
verification of the information contained within the application;

16. A statement in writing by the applicant that he or she certifies under penalty
of perjury that all the information contained in the application is true and correct;

B. If the applicant has completed the application improperly, or if the application is
incomplete, the City Manager or designee shall within ten (10) days of receipt of the
original application, notify the applicant of such fact.

C. The fact that an applicant possesses other types of state or City permits or licensees
does not exempt the applicant from the requirement of obtaining a Medical Marijuana
Business permit.

15-90. Term, Renewals and Fees
A. Unless otherwise suspended or revoked, a Medical Marijuana Business permit shall
expire one (1) year following its issuance. An operator of a Medical Marijuana Business
may re-apply for a permit for subsequent year(s).

B. Every application for a permit or renewal shall be accompanied by a nonrefundable
fee, as established by resolution adopted by the City Council from time to time. This
application or renewal fee shall not include fingerprinting, photographing or background-
check costs and shall be in addition to any other business license fee or permit fee
imposed by this code or other governmental agencies.

15-91. Notifications Within ten (10) calendar days of filing an application for a Medical
Marijuana Business permit, the applicant shall provide the City Manager or designee
with proof that all residents and property owners within 300 feet of the proposed
premises have been notified in writing by U.S. mail of the applicant's intent to open such
a business and filing of such application.

15-92. Investigation and Action on Application After the background checks and
investigation are complete, and in no case later than forty-five (45) days after receipt of
a completed application, the City Manager or designee shall determine whether to issue
the Medical Marijuana Business permit. The City Manager or designee may grant the
permit subject to conditions he or she deems reasonable under the circumstances to
protect the public health, safety and welfare of the community. The City Manager or
designee shall cause a written notice of his or her decision to issue or deny a permit to
be delivered in person or mailed to the applicant by certified U.S. mail, postage-prepaid,
return receipt requested.

45-93. Grounds for Denial of Permit. The grounds for denial of a permit shall be one
or more of the following:

A. The business or conduct of the business at a particular location is prohibited
by any local or state law, statute, rule or regulation.

B. The applicant has violated any local or state law, statute, rule or regulation
relating to medical marijuana business.

C. The applicant has knowingly made a false statement of material fact or has
knowingly omitted to state a material fact in the application for a permit.

D. The applicant, his or her agent or employees, or any person who is exercising
managerial authority on behalf of the applicant has been convicted of a felony or
of a misdemeanor involving moral turpitude, or has engaged in misconduct
related to the qualifications, functions or duties of a permittee. A conviction within
the meaning of this Article means a plea or verdict of guilty or a conviction
following a plea of nolo contendere.

E. The applicant has engaged in unlawful, fraudulent, unfair, or deceptive-
business acts or practices.

F. The applicant has committed any act, which, if done by a permittee, would be
grounds for suspension or revocation of a permit.

G. An applicant is under eighteen (18) years of age.

H. The Medical Marijuana Business does not comply with the ordinance
standards of the City of Porterville Municipal Code or the development standards
set forth in this Article.

I. The required application or renewal fees have not been paid.

45-94. Appeal from Denial

A. An applicant aggrieved by the decision of the City Manager or designee to deny a
permit may appeal such decision to the City Council by filing a written notice with the
City Clerk within ten (10) calendar days of service of the written notice of decision. If an
appeal is not taken within such time, the City Manager's decision shall be final.
B. Upon filing of a timely appeal, the permit application shall be scheduled by the City-Clerk for a public hearing within forty-five (45) calendar days.

C. Notice of the hearing shall be given by the posting of notice on the premises where the activity is to be conducted for a period of not less than five (5) working days prior to the date of the hearing. In addition, a copy of the notice of hearing shall be mailed to the applicant at least five (5) working days in advance of the hearing. The City Council may give such additional notice of hearing as it deems appropriate in a particular case.

D. Following public hearing, the City Council may grant the permit subject to such conditions as it deems reasonable under the circumstances to protect the public health, safety, and welfare of the community or it may deny the issuance of the permit for any of the grounds specified in this Article. The decision of the City Council shall be final.

15-96 Suspension or Revocation of Permit

A. The City Manager or designee may suspend or revoke a permit when the permittee or the permittee's agent or employee has committed any one or more of the following acts:

1. Any act which would be considered a ground for denial of the permit in the first instance.

2. Violates any other provision of this Article or any local or State law, statute, rule or regulation relating to his or her permitted activity.

3. Engages in or permits misconduct substantially related to the qualification, functions or duties of the permittee.

4. Conducts the permitted business in a manner contrary to the health, safety, or welfare of the public.

5. Fails to take reasonable measures to control the establishment's patrons' conduct resulting in disturbances, vandalism, or crowd control problems occurring inside of or outside the premises, traffic control problems, or creation of a public or private nuisance, or obstruction of the business operation of another business.

6. Violates or fails to comply with the terms and conditions of the permit.

B. Prior to suspension or revocation, the City Manager or designee shall conduct a hearing. Written notice of the time and place of such hearing shall be served upon the permittee at least five (5) working days prior to the date set for such hearing. The notice shall contain a brief statement of the grounds to be relied upon for revoking or suspending the permit. Notice may be given either by personal delivery to the permittee-
or by certified U.S. Mail, postage prepaid, addressed to the permittee at his or her address as it appears in his application for the permit.

C. If any permittee or person acting under the authority of a permittee is convicted of a public offense in any court for the violation of any law which relates to his or her permit, the City Manager or designee may immediately revoke the permit without any further action, other than giving notice of revocation to the permittee. In this circumstance during the pendency of any appeal to the City Council, the permit shall not remain in effect.

D. Any permittee aggrieved by the decision of the City Manager or designee in suspending or revoking a permit may, within ten (10) calendar days, appeal to the City Council by filing a written notice with the City Clerk. Unless otherwise stated in this Article, during the pendency of the appeal to the Council, the permit shall remain in effect. If such appeal is not taken within ten (10) days, the decision of the City Manager or designee shall be final. If an appeal is timely filed, the appeal shall be held in accordance with the procedures for considering an appeal of the denial of a permit. The City Council may suspend or revoke the permit for any of the grounds specified in this Article. The City Council’s decision shall be final.

15-96. Judicial Review Judicial review of a final decision made under this Article may be had by filing a petition for a writ of mandate with the superior court in accordance with the provision of the California Code of Civil Procedure section 1094.5. Any such petition shall be filed within ninety (90) days after the day the decision becomes final as provided in California Code of Civil Procedure section 1094.6, which shall be applicable for such actions.

15-97. Effect of Denial or Revocation When the City Manager or designee has denied or revoked a permit and the time for appeal to the City Council has elapsed, or if after appeal to the City Council, the decision of the City Manager or designee has been affirmed by the City Council, no new application for a permit shall be accepted from the applicant and no permit shall be issued to such person or to any corporation in which he or she shall have any beneficial interest for a period of one (1) year after the action denying or revoking the permit.

15-98. Operating Requirements A Medical Marijuana Business, once permitted by the City Manager or Designee, shall meet the following operating standards for the duration of the use:

A. A Medical Marijuana Business shall be open for business only between the hours of 8:00 a.m. and 8:00 p.m. on any particular day.

B. A Medical Marijuana Business shall maintain a current register of the names of all employees employed by the Business.
C. A Medical Marijuana Business shall maintain a current register of all qualified patients, persons with identification cards and primary caregivers to whom it provides or distributes medical marijuana. Once documented-the qualified patients, persons with identification cards and primary caregivers shall be "registered" patrons of the Business. The Business's register shall be subject to periodic inspection to ensure compliance with the state law. The Business shall further maintain records of all patients and primary caregivers using the identification card number only when issued by the county, or its agent, pursuant to California Health and Safety Code section 11362.7 et seq., so as to protect the confidentiality of the cardholders, or a copy of the written recommendation from a physician stating the need for medical marijuana.

D. A Medical Marijuana Business shall post a sign, either at the building entrance or inside at the entrance, with a notice indicating that persons under the age of eighteen (18) years are precluded from entering the premises unless they are a qualified patient and they are in the presence of their parent or guardian.

E. A Medical Marijuana Dispensary may not possess more than eight (8) ounces of dried marijuana per registered qualified patient or primary caregiver on the premises. However, if a qualified patient or primary caregiver has a doctor's recommendation that this quantity does not meet the qualified patient's medical needs, the dispensary may increase the amount of dried marijuana per the doctor's recommendation, the dispensary may not possess an amount of marijuana in excess of the registered patient's needs.

F. No marijuana shall be smoked, ingested or otherwise consumed on the premises of the Business. The term "premises" includes the actual building, as well as any accessory structures, parking areas, or other immediate surroundings. The building entrance to a Medical Marijuana Business shall be clearly and legibly posted with a notice indicating that smoking, ingesting or consuming marijuana on the premises or in the vicinity of the Business is prohibited.

G. Any cultivation of medical marijuana or processing of medical marijuana conducted by the Business shall at all times occur in a secure, locked, and fully enclosed structure. No Medical Marijuana Business may cultivate or process more than 99 marijuana plants, whether mature or immature.

H. No Medical Marijuana Business shall hold or maintain a license from the State Department of Alcohol Beverage Control to sell alcoholic beverages, or operate a business that sells alcoholic beverages. In addition, alcohol shall not be provided, stored, kept, located, sold, dispensed, or used on the premises of the Business.

I. No Medical Marijuana Business shall conduct or engage in the commercial sale of any product, good or service. The term "commercial sale" does not include the-
provision of medical marijuana on terms and conditions consistent with this Article and the Compassionate Use Act of 1996, and any amendments thereto.

J. A Medical-Marijuana Business shall provide adequate security on the premises, including lighting and alarms, to ensure the safety of persons and to protect the premises from theft.

K. A Medical-Marijuana Business shall provide litter removal services once during each day of operation on and in front of the premises and, if necessary, on public sidewalks within one hundred (100) feet of the premises.

L. A Medical-Marijuana Business shall not cultivate, distribute or sell medical marijuana for a profit. A Business may receive compensation for its actual expenses, including reasonable compensation for service provided, or for payment of out-of-pocket expenses incurred in providing those services. However, any such Business must pay applicable sales tax on such sales or services and maintain the applicable seller's permit or similar permit from the State Franchise Tax Board or other applicable agency.

M. A Medical-Marijuana Business shall meet all the operating criteria for the dispensing of medical marijuana as required pursuant to California Health and Safety Code sections 11362.5 and 11362.7 et seq.

N. Each Medical Marijuana Business shall allow the City Manager or designee to have access to the Business's books, records, accounts, and any and all data relevant to its activities for the purposes of conducting an audit or examination. Books, records, accounts, and any and all relevant data shall be produced no later than 24 hours after receipt of the City Manager's written request(s).

O. The Medical-Marijuana Business shall meet any specific additional operating procedures and measures as may be imposed as conditions of approval by the City Manager or designee to ensure that operations of the Business is consistent with protection of the health, safety and welfare of the community, qualified patients and primary caregivers, and will not adversely affect surrounding uses.

P. The building in which the Medical Marijuana Business is located shall comply with all applicable local, state and federal rules, regulations and laws, including but not limited to, building codes and the Americans with Disability Act, as certified by the Building Official of the City.

Q. Any marijuana provided by a Medical Marijuana Business for the purpose of consumption by the recipient shall be contained in a package that includes, in a conspicuous location, the following warning: "Smoking may be hazardous to the health of the consumer, and smoking by pregnant women may result in fetal injury, premature birth and low birth weight. Further, ingestion of marijuana in any
form may be hazardous to the health of the consumer and may impair the judgment of the consumer."

R. A Medical Marijuana Business that provides marijuana in the form of food or other comestibles shall obtain and maintain the appropriate licenses from the County Health Department for the provisions of food or other comestibles.

S. A Medical Marijuana Business shall provide to the City Manager or designee, upon request, written evidence to the City Manager or designee's reasonable satisfaction, that the Business is not engaged in interstate commerce.

T. No Medical Marijuana Business shall sell or display any drug paraphernalia as defined in California Health and Safety Code section 11364, et seq., or any implement that may be used to administer, use, consume, smoke or ingest medical marijuana.

Failure to comply with any of the above operating requirements shall result in the revocation of any permit issued.

15-99. Zoning and Development Standards Failure to comply with any of the above operating requirements shall result in the revocation of any permit issued.

15-100. Minors

A. It shall be unlawful for any permittee, operator, or other person in charge of any Medical Marijuana Business to employ any person who is not at least eighteen (18) years of age.

B. Persons under the age of eighteen (18) years shall not be allowed on the premises of a Medical Marijuana Business unless they are a qualified patient and they are in the presence of their parent or guardian.

15-101. Display of Permit Every Medical Marijuana Business shall display at all times during business hours the permit issued pursuant to the provisions of this Article in a conspicuous place so that the same may be readily seen by all persons entering the Medical Marijuana Business.

15-102. Transfer of Permits

A. A permittee shall not operate a Medical Marijuana Business under the authority of a Medical Marijuana Business permit at any place other that the address of the Medical Marijuana Business stated in the application for the permit.

B. A permittee shall not transfer ownership or control of a Medical Marijuana Business permit to another person unless and until the transferee obtains an amendment to the permit from the City Manager or designee stating that the transferee is now the permittee. Such an amendment may be obtained only if the transferee files an
application with the City Manager or designee in accordance with this Article and accompanies the application with the transfer fee in an amount set by the resolution of the City Council, and the City Manager determines that the transferee would be entitled to the issuance of an original permit.

C. No permit may be transferred when the City Manager or designee has notified the permittee that the permit has been or may be suspended or revoked.

D. Any attempt to transfer a permit either directly or indirectly in violation of this Article is hereby declared void, and the permit shall be deemed revoked.

15-103. Violations of Article: Enforcement

A. Any person that violates any provision of this Article shall be guilty of a separate offense for each and every day during any portion of which any such person commits, continues, permits, or causes a violation thereof, and shall be penalized accordingly.

B. Any use of condition caused or permitted to exist in violation of any of the provisions of this Article shall be and is hereby declared a public nuisance and may be summarily abated by the City pursuant to the City of Porterville Municipal Code.

C. Any person who violates, causes, or permits another person to violate any provision of this Article commits a misdemeanor.

D. The violation of any provisions of this Article shall be and is hereby declared to be contrary to the public interest and shall, at the discretion of City, create a cause of action for injunctive relief.

E. In addition to the civil remedies and criminal penalties set forth above, any person that violates the provisions of this Article may be subject to administrative remedies as set forth by City ordinance.

15-104. Severability. The provisions of this Article are hereby declared to be severable. If any provision, clause, word, sentence, or paragraph of this Article or the application thereof to any person, establishment, or circumstances shall be held invalid, such invalidity shall not affect the other provisions of this Article.

15-105. Existing Medical Marijuana Dispensaries. Time Limit for Filing Application for Permit. The continued operation of a Medical Marijuana Business in existence before the effective date of this Article without having applied for a permit obtained pursuant to the provisions of this Article for more than ninety (90) days after the effective date of this Article shall constitute a violation of this Article.

SECTION 3. Article _____, Sections 21-____ through 21-____ is hereby added to Chapter 21 (Porterville Development Code), as follows:

Findings and Purpose.
A. The City Council of the City of Porterville, based on evidence presented to it in the proceedings leading to the adoption of this chapter, hereby finds that the cultivation, processing, and distribution of medical cannabis in the city has caused and is causing ongoing impacts to the community. These impacts include increases in various types of crime due to outdoor grows, damage to buildings containing indoor grows, including improper and dangerous electrical alterations and use, inadequate ventilation leading to mold and mildew, increased frequency of home-invasion robberies and related crimes, and that many of these impacts have fallen disproportionately on residential neighborhoods but nonetheless also negatively impact properties in the commercial districts. These impacts have also created an increase in response costs, including code enforcement, building, land use, fire, and police staff time and expenses.

B. The City Council also acknowledges that the voters of the State of California have provided a criminal defense to the cultivation, possession and use of medical cannabis for medical purposes under the Compassionate Use Act, but that the Compassionate Use Act does not address land use or building code impacts or issues arising from the resulting increase in cannabis cultivation within the city.

C. The purpose and intent of this chapter is to regulate the cultivation, processing and distribution of medical cannabis in a manner that protects the public health, safety, and welfare of the community and mitigates for the cost to the community of the oversight of these activities.

**Interpretation and Applicability.**

A. No part of this chapter shall be deemed to conflict with federal law as contained in the Controlled Substances Act, 21 U.S.C. Section 800 et seq., nor to otherwise permit any activity that is prohibited under that Act or any other local, state, federal law, statute, rule or regulation. The cultivation, processing, and distribution of medical cannabis in the city is controlled by the provisions of this [chapter/article] of the Porterville Development Ordinance.

B. Nothing in this chapter/article is intended, nor shall it be construed, to preclude a landlord from limiting or prohibiting cannabis cultivation, smoking or other related activities by tenants.

C. Nothing in this chapter/article is intended, nor shall it be construed, to burden any defense to criminal prosecution otherwise afforded by California law.

D. Nothing in this chapter is intended, nor shall it be construed, to exempt any cannabis related activity from any and all applicable local and state construction,
electrical, plumbing, land use, or any other building or land use standards or permitting requirements.

E. Nothing in this chapter is intended, nor shall it be construed, to make legal any cultivation, transportation, sale or other use of cannabis that is otherwise prohibited under California law.

F. All cultivation, processing and distribution of medical cannabis within city limits shall be subject to the provisions of this chapter/article, regardless of whether cultivation, processing, or distribution existed or have occurred prior to adoption of this chapter.

Definitions.

For the purpose of this chapter, the following definitions shall apply unless the context clearly indicates or requires a different meaning.

A. **DWELLING UNIT.** A room or suite of rooms including one (1) and only one (1) kitchen, and designed or occupied as separate living quarters for one (1) family.

B. **MEDICAL CANNABIS (also known as medical marijuana).** Cannabis, including constituents of cannabis, THC and other cannabinoids, used as a physician-recommended form of medicine or herbal therapy.

C. **MEDICAL CANNABIS COOPERATIVE** or **COLLECTIVE.** Any person, association, cooperative, affiliation, or collective of persons who provide education, referral, or network services, and/or facilitation or assistance in the cultivation, processing or distribution of medical cannabis.

D. **MEDICAL CANNABIS CULTIVATION AREA.** The maximum dimensions allowed for the growing and processing of medical cannabis. For the purpose of this chapter, the allowable cultivation area shall apply to the outward edge of the vegetative canopy.

E. **MEDICAL CANNABIS CULTIVATION FACILITY.** A facility at which medical cannabis is grown and harvested for supply to a medical cannabis processing facility and/or a medical cannabis distribution facility.

F. **MEDICAL CANNABIS DISTRIBUTION.** The supply to a qualified patient by any person, including a primary caregiver, cooperative or collective, of medical cannabis that is not grown in the qualified patient's residence.

G. **MEDICAL CANNABIS DISTRIBUTION FACILITY/DISPENSARY.** Any facility or location where the primary purpose is to distribute medical cannabis as a medication upon recommendation by a physician and where medical cannabis is made available to or distributed by or to a primary caregiver or a qualified patient in strict accordance with the Compassionate Use Act of 1996 (Cal. Health and Safety Code §§ 11362.5 et seq.).

H. **MEDICAL CANNABIS PROCESSING.** Includes, but is not limited to: manicuring, drying, curing, pressing, cooking, baking, infusing, grinding, bagging, packaging, rolling.
I. **MEDICAL CANNABIS PROCESSING FACILITY.** A facility at which medical cannabis is processed for supply to a medical cannabis distribution facility.

J. **QUALIFIED PATIENT.** As defined in Cal. Health and Safety Code §§ 11362.7 et seq., and as it may be amended from time to time.

K. **RESIDENCE.** A legal dwelling unit.

**SEVERABILITY.**

If any part of this chapter is held to be invalid or inapplicable to any situation by a court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this chapter.

**PERSONAL USE - REQUIREMENTS AND REGULATIONS**

**Cultivation.**

A. A qualified patient shall be allowed to cultivate medical cannabis for their own personal use. Cultivation of medical cannabis for personal use shall be in conformance with the following standards:

1. The residence shall remain at all times a residence with legal and functioning cooking, sleeping and sanitation facilities. Medical cannabis cultivation shall remain at all times accessory to the residential use of the property;

2. The qualified patient shall reside in the residence where the medical cannabis cultivation occurs;

3. Cultivation of medical cannabis for personal use shall occur only on the parcel either within the residence occupied by the qualified patient, or in a self-contained accessory building that is secured, locked, and fully enclosed and which is for the exclusive use of the qualified patient. Cultivation of medical cannabis for personal use shall not displace required off-street parking;

4. The medical cannabis cultivation area shall not exceed 50 square feet and shall not exceed ten feet in height per residence, regardless if cultivated within the residence or in an accessory building unless an exception request is obtained per ____ (B);

5. If required by California Building or Fire Code, the wall(s) adjacent to the cultivation area shall be constructed with 5/8-inch Type X moisture-resistant drywall;

6. The medical cannabis cultivation area shall be in compliance with the current adopted edition of the California Building Code § 1203.4 Natural Ventilation or § 402.3 Mechanical Ventilation (or its equivalent(s));
7. The cultivation of medical cannabis shall not adversely affect the health or safety of the residents, the residence or accessory building in which it is cultivated, or nearby properties through creation of mold, mildew, dust, glare, heat, noise, noxious gasses, odor, smoke, traffic, vibration, surface runoff, or other impacts, or be hazardous because of the use or storage of materials, processes, products or wastes;

8. Medical cannabis cultivation lighting shall not exceed 1,200 watts unless an exception request is obtained per __________ (B);

9. All electrical equipment used in the cultivation of medical cannabis, (e.g., lighting and ventilation) shall be plugged directly into a wall outlet or otherwise hardwired; the use of extension cords to supply power to electrical equipment used in the cultivation of medical cannabis is prohibited;

10. Any electrical wiring/rewiring shall first require an electrical permit from the Building Department;

11. The use of gas products (e.g., CO₂, butane, etc.) for medical cannabis cultivation is prohibited unless an exception request is obtained per __________ (B); and

12. From a public right-of-way, there shall be no exterior evidence of medical cannabis cultivation occurring at the property.

B. The medical cannabis cultivation area may exceed the 50 square foot maximum per residence, up to a total of 100 square feet of cultivation area, or the standards in § ____A)(4), (8) or (11) above may be modified, upon approval of a Conditional Use Permit by the City Council per Chapter 605 of the Porterville Development Ordinance.

1. If the Conditional Use Permit includes a request to modify the standards prescribed in § ____A)(4), (8) or (11), documentation and information shall be provided identifying which standards are proposed to be modified and why such modification would not detrimentally affect adjacent properties or the use of the dwelling unit for its intended residential occupancy.

2. If required by California Building or Fire Code, the applicant shall make specified improvements to the residence with a Building Permit, if one is needed. Such improvements may include, but are not limited to, electrical system upgrades.

3. The City Council shall review the submitted application and determine if the specific circumstances warrant granting an exception to § ____ (A)(4), (8) or (11).

C. Medical cannabis cultivation is prohibited as a home occupation.

D. No distribution of medical cannabis cultivated for personal use shall be allowed.

Processing.
A. A qualified patient shall be allowed to process medical cannabis cultivated within his or her private residence. Processing of medical cannabis cultivated at the residence shall be in conformance with the following standards:

1. Only medical cannabis cultivated at the residence in conformance with this chapter shall be allowed to be processed at the residence;

2. The primary use of a dwelling unit shall remain at all times a residence with legal and functioning cooking, sleeping and sanitation facilities. Medical cannabis processing shall remain at all times accessory to the residential use of the property;

3. The medical cannabis processing shall be in compliance with the current adopted edition of the California Building Code § 1203.4 Natural Ventilation or § 402.3 Mechanical Ventilation (or its equivalent(s));

4. The use of gas products (e.g., CO₂, butane, etc.) for medical cannabis processing is prohibited; and

5. The processing of medical cannabis shall not adversely affect the health or safety of the residents, the residence or accessory building in which it is processed, or nearby properties through creation of mold, mildew, dust, glare, heat, noise, noxious gasses, odor, smoke, traffic, vibration, surface runoff, or other impacts, or be hazardous because of the use or storage of materials, processes, products or wastes.

B. Medical cannabis processing is prohibited as a home occupation.
C. No sale or distributing of medical cannabis processed for personal use shall be allowed.

**Individual Distribution.**

Medical cannabis cultivated or processed for personal use as provided for in this chapter shall not be distributed to any person, cooperative or collective.

**DISPENSARIES, COOPERATIVES AND COLLECTIVES**

**Cooperatives and Collectives Prohibited.**

Medical cannabis Cooperatives and Collectives are not a permitted use and are prohibited in any and all zoning designations or districts within the City limits.

**Distributing/Dispensaries**

Medical cannabis distributing facilities or dispensaries are not a permitted use and are prohibited in any and all zonings designations or districts within the City limits.

**ENFORCEMENT.**
Any violation of this chapter is subject to any and all penalties as prescribed in the Porterville Municipal Code, in addition to being subject to other remedies provided by law, including but not limited to, injunctive relief, nuisance abatement action, summary abatement of immediately hazardous conditions, and all other applicable fines, penalties and remedies. This chapter is adopted to address public health and safety issues, and as such, carries with it an express legislative intent to be interpreted strictly, enforced with an emphasis on public and community safety, and enforced rigorously in a manner such as to deter further violations.
SUBJECT: Presentation by Beckman Instruments Seeking Local Support for Partial Delistment of Porterville Superfund Site

SOURCE: City Manager

COMMENT: Representatives of Beckman Coulter, Inc. have requested the opportunity to make a presentation to the City Council, seeking the City’s support for Beckman’s petition of the Environmental Protection Agency (EPA) for the partial delistment of the local Superfund site.

The Beckman Porterville Superfund Site covers approximately 500 acres, with the plant facility itself occupying twelve (12) acres. The company has manufactured printed circuit boards and electronic instrument parts at the facility since 1968, with wastes generated from these operations including solvents, acid solutions, and heavy metals. From 1974 until 1983, these wastes were disposed of in an evaporation pond on site. This pond was the most likely source of groundwater contamination that was discovered in the area surrounding the Beckman facility. In addition to the pond, three other areas where wastes were dumped included the former enchant tank area, the ammonium persulfate and copper waste discharge area (known as the soil stain area), and the depression area. Liquids from the pond were first detected in 1978 in a leak detection sump underlying the pond. Subsequent groundwater monitoring indicated the presence of elevated levels of volatile organic compounds (VOCs) and heavy metals. Numerous residences are located near the site, with approximately 500 people living within a mile of the plant at the time of detection and affected by the contaminated groundwater.

In 1983, the pond liquids, liners, and surface soils were removed and disposed of in an EPA-approved facility. Beckman installed groundwater monitoring wells and provided alternate water supplies to about 300 residences affected by the contamination. Between 1983 and 1985, the company connected over 150 of the affected residences to the City’s municipal water supply system. In 1985, Beckman installed a groundwater pump and treat system to stop the westward spread of contaminants in the upper aquifer and to begin cleaning the groundwater. These activities helped to slow, and eventually halt, the migration of the contaminant plume. In 1987, an eastern containment and reclamation
well field was installed. Groundwater from this area is pumped to an on-site air stripping tower. The treated groundwater from both systems is used for local irrigation or is diverted to percolation basins east of the facility and near the Tule River. By January 1990, groundwater cleanup standards were achieved in the upper aquifer.

In 1989, the EPA selected a remedy to clean up the soils and lower aquifer areas of the site by extracting the contaminated groundwater, treating the groundwater by air stripping to remove the contaminants, releasing the treated groundwater into the aquifer, and excavating the lead-contaminated soil and disposing of it in an EPA-approved facility. In 1990, under EPA oversight, Beckman began designing the technical specifications for the cleanup. The design of the groundwater remedy was completed in 1992. To date, soil cleanup has been completed and all components for the groundwater cleanup have been constructed and are operating.

The EPA’s Record of Decision (ROD) selected remedy in the upper aquitard and lower aquifer was carried out from 1991 to 1999 when cleanup goals were reached in most of the upper aquitard and lower aquifer groundwater. Small, localized areas of the upper aquitard and lower aquifer remained above the cleanup goal for 1,1-dichloroethylene (1,1-DCE) of 6 micrograms/liter. A focused operation of pump and treat system in areas failed to show progress toward achieving the cleanup goal due to the inability to accelerate contaminant removal from the upper aquitard. Since 1999, groundwater concentrations of 1,1-DCE have generally remained stable or decreased. In September 2003, EPA conducted a Five-Year Review of the site remedy, and concluded that these small remaining areas cannot be cleaned up with the conventional pump and treat at a reasonable cost.

To date, all remediation construction at the site is complete. The pump and treat system operating at the site has been effective in reducing the levels of contamination in the groundwater, and cleanup standards for the upper aquifer have been achieved. The soils contaminated with lead have been removed from the site, eliminating the potential for direct exposure to hazardous materials at the site. Cleanup of the lower aquifer at the facility is underway and will continue until established cleanup standards are achieved.

From August 1-30, 2005, the EPA conducted a comment period to allow the public an opportunity to comment on the three alternatives considered to solve this issue: 1) no action; 2) resume pump and treat; or 3) monitored natural attenuation (MNA), which was the EPA's preferred alternative. The EPA conducted a public meeting in Porterville on August
9, 2005, and after considering comments received, issued an amendment to the ROD in September 2005. The ROD amendment memorializes EPA's decision to change the remedy from pump and treat to MNA and provides EPA's response to public comments.

Under EPA oversight, Beckman installed four new monitoring wells in August 2006 and has begun monitoring to implement the MNA remedy. In September 2008, EPA conducted the third five-year review of the site and determined that the MNA remedy is protective of human health and the environment. Concentrations of 1,1-DCE in the groundwater continue to decline.

RECOMMENDATION: That the City Council receive the presentation from Beckman Coulter, Inc., and consider supporting Beckman's petition of the EPA for partial delistment of the Superfund site.

ATTACHMENTS:
1. Letter from Beckman Coulter dated November 17, 2011
2. Beckman Instruments Superfund EPA Record of Decision
3. Superfund EPA Record of Decision Amendment
November 17, 2011

VIA E-MAIL

John D. Lollis
City Manager
City of Porterville
291 North Main Street
Porterville, CA 93257

Re: Presentation Request for Partial Delisting of the Beckman Instruments Superfund Site

Dear John:

This letter is a request for the opportunity to present to the city council a presentation summarizing Beckman Coulter’s intent for the partial delisting of the Beckman Instruments Superfund Site.

If possible, we would like to be on the agenda for the December 7, 2011 meeting.

If you have any questions regarding this request, please do not hesitate to call me at (559) 782-5250.

Sincerely,

Robert D. Keeley
Corporate Staff
Manager Environmental Affairs, Health & Safety
Beckman Instruments (Porterville Plant)

Superfund Record of Decision: Beckman Instruments, CA

Abstract:


THE SELECTED REMEDIAL ACTION FOR THIS SITE INCLUDES EXCAVATION AND OFFSITE DISPOSAL OF LEAD-CONTAMINATED SOIL; CONTINUED OPERATION OF THE GROUND WATER PUMPING AND TREATMENT SYSTEM FOR THE UPPER AQUIFER; PUMPING AND TREATMENT OF GROUND WATER FROM UPPER AQUIFERS AND LOWER AQUIFER USING AIR STRIPPING; OFFSITE DISCHARGE OF ALL TREATED WATER INTO INfiltration BASINS OR IRRIGATION CANALS; AND GROUND WATER MONITORING. THE ESTIMATED PRESENT WORTH COST FOR THE SELECTED REMEDY IS $4,740,000. THIS ESTIMATE DOES NOT INCLUDE COSTS FOR CONTINUED OPERATION OF THE EXISTING PUMPING AND TREATMENT SYSTEM.

Remedy:

THE SELECTED REMEDY FOR THE BECKMAN INSTRUMENTS SITE ADDRESSES GROUNDWATER CONTAMINATED WITH VOLATILE ORGANIC CHEMICALS (VOCS) AND SOILS CONTAMINATED WITH LEAD. THIS ACTION REPRESENTS THE FINAL REMEDIAL ACTION TO REMOVE CONTAMINANTS FROM GROUNDWATER AND TO CONTROL MOVEMENT OF LEAD IN SOILS. GROUNDWATER CONTAMINATION WAS FIRST ADDRESSED IN 1985 WHEN BECKMAN INSTRUMENTS INSTITUTED A GROUNDWATER PUMP AND TREAT PROGRAM TO CONTROL CONTAMINANT MOVEMENT AND TO REMOVE AND TREAT CONTAMINATED GROUNDWATER. THE SELECTED REMEDY INCLUDES A CONTINUATION AND EXPANSION OF THIS PUMP AND TREAT PROGRAM, PLUS OTHER ELEMENTS.

THE MAJOR ELEMENTS OF THE SELECTED GROUNDWATER AND SOIL REMEDY INCLUDE:
* GROUNDWATER EXTRACTION, TREATMENT, AND DISCHARGE. THIS ACTION INVOLVES PUMPING CONTAMINATED GROUNDWATER FROM THE UPPER AND LOWER AQUIFERS AND THE AQUIFER SEPARATING THE TWO AQUIFERS. THE EXTRACTED GROUNDWATER WOULD BE TREATED BY AIR STRIPPING TO REMOVE VOLATILE ORGANIC COMPOUNDS (VOCs). TREATED WATER WOULD BE DISPOSED OF INTO INFILTRATION BASINS TO RECHARGE GROUNDWATER. TREATED WATER COULD ALSO BE USED FOR IRRIGATION PURPOSES.

* GROUNDWATER MONITORING. GROUNDWATER MONITORING SHALL BE CONDUCTED CONSISTENT WITH PROVISIONS UNDER THE RESOURCE CONSERVATION AND RECOVERY ACT, SECTION 264, TO ENSURE THAT CONTAMINANTS WHICH EXCEED CLEANUP REQUIREMENTS ARE NOT RELEASED INTO THE ENVIRONMENT.

* SOIL EXCAVATION AND DISPOSAL. SOIL CONTAMINATED WITH LEAD ABOVE 200 PPM WILL BE EXCAVATED AND DISPOSED OF OFF-SITE IN A DISPOSAL FACILITY WHICH MEETS RCRA AND CERCLA REQUIREMENTS. ADDITIONAL SAMPLING TO BETTER DEFINE THE CONTAMINATION EXCEEDING SOIL CLEANUP LEVELS WILL BE PERFORMED IN THE DESIGN PHASE. THE SELECTED REMEDY IS THE FINAL REMEDY FOR THE BECKMAN SITE. THE REMEDIAL ACTION WILL REMOVE CONTAMINANTS FROM THE GROUNDWATER, REDUCING THE THREAT TO PUBLIC HEALTH AND ALLOWING THE AQUIFER TO RETURN TO BENEFICIAL USES. SOIL EXCAVATION AND OFFSITE DISPOSAL WILL ELIMINATE ANY HEALTH THREAT AND PREVENT MOVEMENT OF CONTAMINANTS WHEN THE SOIL MASS IS PROPERLY CONTAINED IN AN APPROVED LANDFILL. THE SELECTED REMEDY WILL PROTECT GROUNDWATER RESOURCES, PREVENT MIGRATION OF CONTAMINATED SOIL, AND ELIMINATE DIRECT CONTACT RISKS. THE SELECTED REMEDY WILL ENSURE THE LONG-TERM PROTECTION OF PUBLIC HEALTH AND THE ENVIRONMENT THROUGH REMOVAL OR CONTAINMENT OF TOXIC CHEMICALS. TREATMENT (AIR STRIPPING) WILL BE USED TO REMOVE CONTAMINANTS. THE PRESENT WORTH COST OF THE SELECTED REMEDY IS ESTIMATED AT $4,740,000. THIS ESTIMATE DOES NOT INCLUDE COSTS FOR THE EXISTING PUMP AND TREAT SYSTEM.

Text:

This ROD has an associated ESD.

RECORD OF DECISION

SITE NAME AND LOCATION

BECKMAN INSTRUMENTS SITE
PORTERVILLE, CALIFORNIA

STATEMENT OF BASIS AND PURPOSE

THIS DECISION DOCUMENT PRESENTS THE SELECTED REMEDY FOR CONTAMINATED GROUNDWATER AND SOIL AT THE BECKMAN INSTRUMENTS SITE. THE DOCUMENT WAS DEVELOPED IN ACCORDANCE WITH THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT OF 1980 (CERCLA),
AS AMENDED BY THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA), AND TO THE EXTEND PRACTICABLE, THE NATIONAL CONTINGENCY PLAN (NCP; 40 CFR PART 300). THIS DECISION IS BASED ON THE RECORD OF DECISION FOR THIS SITE. THE ATTACHED INDEX (ATTACHMENT 1) IDENTIFIES THE ITEMS ON WHICH THE SELECTION OF THE REMEDIAL ACTION IS BASED.

DECLARATION STATEMENT

CONSISTENT WITH CERCLA AS AMENDED BY SARA, AND TO THE EXTEND PRACTICABLE, THE NATIONAL CONTINGENCY PLAN, I HAVE DETERMINED THAT THE SELECTED REMEDY FOR THE BECKMAN INSTRUMENTS SITE MEETS THE REMEDY STANDARDS IN CERCLA SECTION 121, 42 USC SECTION 9521, BY BEING PROTECTIVE OF PUBLIC HEALTH AND THE ENVIRONMENT. I HAVE DETERMINED THAT THE SELECTED REMEDY ATTAINS FEDERAL AND STATE REQUIREMENTS THAT ARE LEGALLY APPLICABLE TO THE HAZARDOUS SUBSTANCES OR ARE RELEVANT AND APPROPRIATE UNDER CIRCUMSTANCES OF RELEASE, AND IS COST EFFECTIVE. THE SELECTED REMEDY UTILIZES PERMANENT SOLUTIONS TO THE MAXIMUM EXTENT PRACTICABLE FOR THIS SITE. TREATMENT, USING AIR STRIPPING, WILL REMOVE CONTAMINANTS FROM THE GROUNDWATER. THE SELECTED REMEDY WILL REDUCE VOLUME, MOBILITY AND TOXICITY OF CONTAMINATED SOILS TO THE MAXIMUM EXTENT PRACTICABLE.

AS THE REMEDIAL ACTION FOR TREATMENT OF GROUNDWATER IN THE LOWER AQUIFER BELOW THE SITE IS EXPECTED TO TAKE 15 TO 25 YEARS TO COMPLETE, A REVIEW OF THE REMEDIAL ACTION WILL BE CONDUCTED EVERY 5 YEARS AFTER COMMENCEMENT TO ENSURE THAT THE REMEDY CONTINUES TO PROVIDE ADEQUATE PROTECTION OF PUBLIC HEALTH AND THE ENVIRONMENT, AND TO ASSESS THE FEASIBILITY OF MEETING CLEANUP GOALS, PARTICULARLY IN THE AQUITARD.

DATE
09/26/89

DANIEL W. MCGOVERN
REGIONAL ADMINISTRATOR

I. SITE NAME, LOCATION AND DESCRIPTION


THE BECKMAN PLANT CONSISTS OF 7 BUILDINGS USED TO MANUFACTURE AND REPAIR ELECTRONIC EQUIPMENT, HOUSE CHEMICALS AND SUPPLIES, HOUSE THE WASTEWATER TREATMENT PLANT, AND TO HOUSE MAINTENANCE EQUIPMENT. THE FACILITY ALSO CONTAINS A TANK FARM, DRUM STORAGE AREA, AND FORMER WASTE HANDLING AREAS.
THIS DECISION DOCUMENT, THE FINAL REMEDY FOR THIS SITE, ADDRESSES THREE RESPONSE ACTIONS FOR THE SITE.

1. UPPER AQUIFER GROUNDWATER CONTAMINATED WITH VOCs.
2. LOWER AQUIFER AND AQUITARD GROUNDWATER CONTAMINATED WITH VOCs.
3. SOILS CONTAMINATED WITH LEAD.

II. SITE HISTORY AND ENFORCEMENT ACTIVITIES


BECKMAN INITIATED GROUNDWATER MONITORING IN THE VICINITY OF THE SOLAR POND IN 1982. PLANT CHEMICALS WERE FIRST DISCOVERED IN THE GROUNDWATER BELOW THE SOLAR POND AND IN DOMESTIC WELLS DOWNGRADIENT OF THE PLANT IN 1983. THE POND WAS CLOSED IN 1983. PRIOR TO DISCOVERY OF CHEMICALS IN THE GROUNDWATER IN 1983, GROUNDWATER BELOW THE SITE AREA WAS USED FOR DOMESTIC AND AGRICULTURAL PURPOSES. AFTER DISCOVERY OF CHEMICALS, BECKMAN PROVIDED ALTERNATIVE WATER SUPPLIES TO APPROXIMATELY 300 RESIDENCES IN THE STUDY AREA. AS AN ADDITIONAL GROUNDWATER PROTECTION MEASURE, 8 PRIVATE WELLS WHICH WERE COMPLETED IN THE UPPER AND LOWER AQUIFERS WERE SEALED OR REPLACED WITH WELLS SCREENED IN THE LOWER AQUIFER TO PREVENT FURTHER SPREAD OF CONTAMINATION.

WITH THE DISCOVERY OF CONTAMINATION IN GROUNDWATER, BECKMAN WAS DISCOVERED BY THE CALIFORNIA DEPARTMENT OF HEALTH SERVICES (DHS) AND THE CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD (RWQCB) TO DETERMINE THE EXTENT OF GROUNDWATER CONTAMINATION. BY JUNE OF 1985, VOCs HAD MIGRATED WESTWARD 9,000 FEET DOWNGRADIENT OF THE SITE. BETWEEN 1983 AND DECEMBER 1988 BECKMAN INSTALLED 63 PIEZOMETERS, 70 FULLY PENETRATING WELLS, 10 PARTIALLY PENETRATING WELLS, AND 2 CLUSTER WELLS IN THE UPPER AQUIFER. BECKMAN ALSO INSTALLED 20 WELLS INTO THE LOWER AQUIFER AND 15 CONTAINMENT/RECLAMATION WELLS TO EXTRACT GROUNDWATER FOR TREATMENT.


IN MARCH 1985, THE CALIFORNIA DEPARTMENT OF HEALTH SERVICES PLACED THE SITE ON CALIFORNIA’S SUPERFUND STATE PRIORITY RANKING LIST PURSUANT TO SECTION 25358 OF THE CALIFORNIA HEALTH AND SAFETY CODE. ON OCTOBER 9, 1985 EPA RECEIVED AN OFFICIAL REQUEST BY CALIFORNIA DHS TO_ASSUME THE LEAD

INTERIM INTERNAL MEASURES

BECKMAN HAS MADE ALTERNATE WATER SUPPLIES AVAILABLE TO APPROXIMATELY 300 RESIDENCES IN THE STUDY AREA. BECKMAN HAS ALSO LOCATED AND ABANDONED WELLS WHICH WERE ACTING AS CONDUITS AND CONTRIBUTING TO THE MIGRATION OF CONTAMINANTS FROM THE UPPER AQUIFER TO THE AQUIFERT AND LOWER AQUIFER. IN THE SUMMER OF 1986, BECKMAN COMMENCED OPERATION OF A SYSTEM TO CONTAIN THE WESTWARD MIGRATION OF CONTAMINANTS IN THE GROUNDWATER OF THE UPPER AQUIFER. THE WESTERN CONTAMINANT/RECLAMATION SYSTEM CONSISTS OF 11 EXTRACTION WELLS WHICH PUMP GROUNDWATER TO AN AIR STRIPPING TOWER FOR TREATMENT. TREATED GROUNDWATER IS USED FOR THE LOCAL IRRIGATION OR IS PLACED IN INFILTRATION BASINS NEAR THE TULE RIVER PURSUANT TO RWQCB WASTE DISCHARGE REQUIREMENTS (§85-057) AND NPDES PERMIT #CA0081653. THE AIR RELEASES FROM THE WESTERN TREATMENT TOWER HAVE BEEN PERMITTED BY THE TULARE COUNTY AIR POLLUTION CONTROL DISTRICT (TCAPCD) UNDER PERMIT #3679-0102-0785-01. IN ADDITION, BECKMAN HAS PREPARED A RISK ASSESSMENT ON THE AIR RELEASES WHICH HAS BEEN REVIEWED BY THE TCAPCD AND EPA. ALTHOUGH THE SITE IS LOCATED WITHIN A NON-ATTAINMENT AREA, THE AIR RELEASES ARE BELOW LEVELS SPECIFIED IN EPA NATIONAL POLICY.

A SECOND CONTAINMENT/RECLAMATION SYSTEM WAS PUT INTO OPERATION IN JULY, 1987. THIS EASTERN SYSTEM COMPRISSES 4 WELLS AND AN AIR STRIPPING TOWER LOCATED ON THE PLANT SITE. THIS TREATED WATER IS USED FOR IRRIGATION OR IS PLACED IN INFILTRATION BASINS LOCATED NORTHEAST OF THE PLANT SITE. THIS SECOND SYSTEM IS OPERATED UNDER RWQCB WASTE DISCHARGE REQUIREMENTS (§87-105). THE AIR RELEASES HAVE BEEN PERMITTED BY THE TCAPCD IN PERMIT #3679-0202-0787-01.

III. HIGHLIGHTS OF COMMUNITY PARTICIPATION

ALL REQUIREMENTS FOR PUBLIC PARTICIPATION AS SPECIFIED IN SECTION 113(K)(2)(B)(i-V) OF CERCLA WERE SATISFIED DURING THE REMEDIAL ACTION PROCESS FOR THE DEVELOPMENT OF THE RECORD OF DECISION.


IV. SCOPE AND ROLE OF OPERABLE UNIT RESPONSE ACTION

DURING THE COURSE OF THE REMEDIAL INVESTIGATION, THREE AREAS OF THE SITE WERE IDENTIFIED THAT POSE A THREAT TO PUBLIC HEALTH AND THE ENVIRONMENT. THESE THREE AREAS ARE:

1. UPPER AQUIFER, CONTAMINATED WITH VOCs.

2. LOWER AQUIFER AND UPPER AQUIFAR, ALSO CONTAMINATED WITH VOCs.

3. SOILS CONTAMINATED WITH LEAD.

BECKMAN HAS INSTITUTED A PROGRAM OF EXTRACTION AND TREATMENT OF CONTAMINATED GROUNDWATER IN THE UPPER AQUIFER WHICH IS EXPECTED TO TAKE LESS THAN 2 YEARS TO COMPLETE. A SIMILAR PUMP AND TREAT PROGRAM IS PROPOSED TO REMEDY THE LOWER AQUIFER AND AQUIFAR, BUT CURRENT PROJECTIONS ESTIMATE THAT THIS MAY NOT BE ACCOMPLISHED FOR 15 TO 25 YEARS. THE SOIL REMEDY WILL TAKE LESS THAN 1 YEAR TO ACCOMPLISH. RECOGNIZING THE SIMILARITY IN TREATMENT OPTIONS FOR BOTH AQUIFERS AND THE BENEFITS OF USING THE SAME TREATMENT UNIT FOR WATER PUMPED FROM EITHER AQUIFER, EPA ELECTED NOT TO SEPARATE THESE ACTIONS INTO OPERABLE UNITS. AS THE SOIL REMEDY CAN BE READILY ACCOMPLISHED, EPA ALSO ELECTED NOT TO MAKE THIS ACTION AN OPERABLE UNIT. THIS RECORD OF DECISION THEREFORE ADDRESSES REMEDIATION OF ALL THREE AREAS AS ONE ACTION, AND IS CONSIDERED THE FINAL REMEDY FOR THIS SITE.

SITE CHARACTERISTICS

RELIEF WHICH RARELY EXCEED 10 FEET OF ELEVATION CHANGE, EXCEPT IN THE VICINITY OF THE RIVER.


WATER QUALITY DATA HAVE BEEN COLLECTED AT THE SITE SINCE 1983. FIVE PRIMARY CONTAMINANTS HAVE BEEN IDENTIFIED IN GROUNDWATER AT THE BECKMAN SITE. THESE VOLATILE ORGANIC COMPOUNDS INCLUDE 1,1,1 TRICHLOROETHANE (1,1,1-TCA), 1,1 DICHLOOROETHYLENE (1,1-DCE), FREON 113, 1,1 DICHLOROETHANE (1,1-DCA), AND TRICHLOROETHYLENE (TCE). OTHER CONTAMINANTS, SUCH AS 1,2 DICHLOOROTHANE AND BENZENE, HAVE BEEN SPORADICALLY DETECTED IN GROUNDWATER IN AND SURROUNDING THE SITE.

UPPER AQUIFER

THE UPPER AQUIFER IS COMPRISED OF SILT, SAND, GRAVEL AND COBBLES AND UNDERLIES THE STUDY AREA TO DEPTHS OF UP TO 75 FEET BELOW LAND SURFACE. THE AVERAGE HYDRAULIC CONDUCTIVITY OF THE UPPER AQUIFER IS APPROXIMATELY 3,600 GALLONS PER DAY PER SQUARE FOOT (GPD/SQ FT). THE UPPER AQUIFER IS UNCONFINED, WITH DEPTH TO GROUNDWATER RANGING BETWEEN 10 TO 33 FEET BELOW GROUND SURFACE (IN SEPTEMBER, 1988).

GROUNDWATER ELEVATIONS IN THE UPPER AQUIFER FLUCTUATE DUE TO VARYING AMOUNTS OF RECHARGE FROM PRECIPITATION AND SURFACE WATER SOURCES AND DUE TO GROUNDWATER PUMPAGE ASSOCIATED WITH SEASONAL GROUNDWATER USE IN THE VICINITY OF THE SITE. DURING THE PERIOD FROM 1985 TO 1988 GROUNDWATER LEVELS HAVE DECLINED PRIMARILY DUE TO REDUCED SURFACE WATER AVAILABILITY AND INCREASED AGRICULTURAL PUMPAGE IN THE AREA.

GROUNDWATER FLOW DIRECTION, FLOW GRADIENTS, AND FLOW RATES IN THE UPPER AQUIFER ARE FACTORS WHICH DETERMINE THE DIRECTION OF MOVEMENT OF VOCs IN THE GROUNDWATER. THESE FACTORS ARE INFLUENCED BY RECHARGE FROM SURFACE WATER SOURCES AND BY THE OPERATION OF THE TWO CONTAINMENT/RECLAMATION WELLFIELDS. THROUGHOUT THE RI/FS, THE FLOW DIRECTION IN THE UPPER AQUIFER WAS TO THE WEST.

CONTAMINANTS APPARENTLY ENTERED THE UPPER AQUIFER IN THE VICINITY OF THE SOLAR EVAPORATION POND AND MIGRATED TO THE WEST. THE MAXIMUM CONCENTRATIONS OF CONTAMINANTS DETECTED IN SEPTEMBER, 1988 AND IN MARCH/MAY, 1989 IN MONITOR OR CONTAINMENT/RECLAMATION WELLS ARE IN TABLE 1. THE AREA OVER WHICH CONTAMINANTS HAVE BEEN DETECTED HAS BEEN GREATLY REDUCED SINCE THE INITIATION OF THE EXTRACTION AND TREATMENT SYSTEMS AT BECKMAN. THE APPROXIMATE AREA (AS OF SEPTEMBER, 1988) CONTAINING CONTAMINATION AT CONCENTRATIONS HIGHER THAN THE STATE OR FEDERAL MAXIMUM CONTAMINANT LEVELS (MCLs) OR STATE ACTION LEVELS (SALS) LISTED IN TABLE 1 IS SHOWN IN FIGURE 2. FIGURE 2 ILLUSTRATES THE EXTENT OF
CONTAMINATION OF THE CHEMICAL 1,1-DCE, SINCE ALL OTHER CONTAMINANTS IN THE UPPER AQUIFER ARE PRESENT AT CONCENTRATIONS LESS THAN THE CLEANUP GOALS.

UPPER AQUIFARD

THE UPPER AQUIFARD IS COMPRISED OF A FINE-GRAINED SEQUENCE OF SILT, CLAYEY SILT, AND SANDY CLAY. THE UPPER AQUIFARD RETARDS MOVEMENT OF WATER BETWEEN THE UPPER AND LOWER AQUIFERS AND RANGES FROM 10 TO 60 FEET IN THICKNESS. THE AQUIFARD IS THINNER AND MORE COARSE-GRAINED IN THE AREA OF THE BECKMAN PLANT, AND THICKENS AND BECOMES MORE FINE-GRAINED TO THE WEST OF THE PLANT.

WATER LEVEL ELEVATIONS WITHIN THE UPPER AQUIFARD AND THE DIFFERENCES IN WATER LEVELS BETWEEN THE UPPER AND LOWER AQUIFERS SUGGEST THAT THE UPPER AQUIFARD PROVIDES RECHARGE TO THE UPPER AQUIFARD IN THE AREA. THE UPPER AQUIFARD, IN TURN, RECHARGES THE LOWER AQUIFER.


LOWER AQUIFARD

THE LOWER AQUIFARD COMPRISSES A SEQUENCE OF SAND AND GRAVEL WITH SILT AND CLAY INTERBEDS. THE TOP OF THE LOWER AQUIFARD LIES 70 TO 130 FEET BELOW GROUND SURFACE AND THE AQUIFARD IS APPROXIMATELY 100 FEET THICK. THE AVERAGE HORIZONTAL HYDRAULIC CONDUCTIVITY OF THE LOWER AQUIFARD IS APPROXIMATELY 55 GPD/SQ FT.

GROUNDWATER IN THE LOWER AQUIFARD OCCURS UNDER CONFINED CONDITIONS, AND THE FLOW IS GENERALLY TO THE WEST-SOUTHWEST. GROUNDWATER ELEVATIONS IN THE LOWER AQUIFARD FLUCTUATE IN RESPONSE TO BOTH LOCAL AND REGIONAL GROUNDWATER PUMPING, AND TO CHANGES IN RECHARGE. GROUNDWATER LEVELS HAVE DECLINED RECENTLY, PRIMARILY DUE TO THE INCREASED AGRICULTURAL PUMPING IN THE AREA. THESE DECLINES ARE CONSISTENT WITH REGION-WIDE TRENDS IN THE TULE GROUNDWATER BASIN.

CONTAMINANTS HAVE BEEN DETECTED IN THE LOWER AQUIFARD IN THE VICINITY OF THE PLANT (WHERE THE AQUIFARD IS RELATIVELY THIN AND COARSE-GRAINED) AND IN LOCATIONS WHERE DOMESTIC WELLS WERE PREVIOUSLY OPEN TO BOTH THE UPPER AND LOWER AQUIFERS (WHERE THE UPPER AQUIFARD WAS CONTAMINATED). CONTAMINANTS HAVE APPARENTLY REACHED THE LOWER AQUIFARD THROUGH THESE

SOILS


ONLY LEAD WAS PRESENT AT LEVELS CONSIDERED TO BE A HEALTH CONCERN. SIX SAMPLES SHOWED LEVELS OF LEAD BETWEEN BACKGROUND AND 40 PPM, THE LEVEL IDENTIFIED AS A CLEANUP GOAL IN THE FEASIBILITY STUDY (FS). ONE SAMPLE SHOWED LEAD AT 40.8 PPM AND ONE SAMPLE SHOWED LEAD AT 1280 PPM. BASED ON THIS INFORMATION, THE FS ESTIMATED THE TOTAL VOLUME OF LEAD-CONTAMINATED SOIL AT 740 CUBIC YARDS. THE OUTLINE OF THE "SOIL STAIN AREA" WHICH CONTAINS THE LEAD CONTAMINATED SOIL, IS SHOWN IN FIGURE 5. FURTHER SAMPLING WILL BE NECESSARY TO MORE PRECISELY DEFINE THE AREA OF CONTAMINATION WHICH EXCEEDS THE CLEANUP GOALS OF 200 PPM LEAD IN SOILS WHICH HAS BEEN ESTABLISHED IN THIS RECORD OF DECISION.

VI. SUMMARY OF SITE RISK

EPA POLICY AND GUIDANCE PROVIDES THAT THE POTENTIAL RISK TO HUMAN HEALTH AND THE ENVIRONMENT BE EVALUATED UNDER THE "NO-ACTION" SCENARIO. THIS SITE SCENARIO ASSUMES THE UNRESTRICTED ACCESS TO SITE CONTAMINANTS (INCLUDING SOILS AND GROUNDWATER) AND THAT ALL THE ON-GOING TREATMENT AND/OR MITIGATION MEASURES ARE TERMINATED IMMEDIATELY. EVALUATION OF THE "NO-ACTION" SCENARIO IS A REQUIREMENT OF THE NATIONAL CONTINGENCY PLAN (NCP), 40 CFR SECTION 300.68 (E) AND (F), TO REPRESENT A BASELINE RISK ASSESSMENT TO CHARACTERIZE THE CURRENT AND POTENTIAL THREATS TO HUMAN HEALTH AND THE ENVIRONMENT. THE RESULTS OF THE BASELINE RISK ASSESSMENT WILL HELP ESTABLISH ACCEPTABLE EXPOSURE LEVELS FOR USE IN DEVELOPING REMEDIAL ALTERNATIVES IN THE FS".

EPA PREPARED AN ENDANGERMENT ASSESSMENT (EA), ALSO CALLED A RISK ASSESSMENT TO EVALUATE RISKS WHICH MAY BE POSED BY THE "NO-ACTION" SCENARIO (DOCUMENT #212 IN THE ADMINISTRATIVE RECORD). BECAUSE ON-GOING TREATMENT SYSTEMS HAVE BEEN OPERATING AT THE SITE SINCE 1985, A TRUE "NO-ACTION" SCENARIO IS IMPOSSIBLE TO DETERMINE. FOR THIS REASON, AUGUST, 1986
WAS CHOSEN AS THE DATE WHICH WOULD SIMULATE THE NO-ACTION SCENARIO. IT WAS ASSUMED THAT THE PUMP AND TREAT SYSTEM WAS SHUT OFF AND CONTAMINANTS WERE ALLOWED TO MIGRATE DOWNGRADIENT AS WOULD OCCUR IF NO REMEDIATION HAD TAKEN PLACE. THE EA FOLLOWS THE PROCEDURES REQUIRED BY THE SUPPERFUND PUBLIC HEALTH EVALUATION MANUAL. THE ENDANGERMENT ASSESSMENT PROCESS CONSISTS OF SEVERAL STEPS. THE FIRST STEP IS CONTAMINANT IDENTIFICATION. THIS EA IDENTIFIED A NUMBER OF COMPOUNDS THAT, BECAUSE OF THEIR TOXICITY OR OTHER HEALTH RISKS, ARE IDENTIFIED AS CONTAMINANTS OF CONCERN FOR THE SITE. AT THIS SITE, VOCs IN GROUNDWATER AND LEAD IN SOILS ARE THE MAIN COMPOUNDS OF INTEREST. THESE CHEMICALS AND THEIR MAXIMUM CONCENTRATIONS ARE PRESENTED IN TABLE 1.

THE SECOND STEP IN THE ENDANGERMENT ASSESSMENT PROCESS IS TO IDENTIFY THE FATE AND TRANSPORT OF THE CONTAMINANTS IDENTIFIED IN STEP ONE TO ASSESS THE PATHWAYS OF HUMAN OR ENVIRONMENTAL EXPOSURE. THE PRIMARY CONTAMINANTS OF CONCERN ARE VOCs IN GROUNDWATER (BOTH UPPER AND LOWER AQUIFERS) AND LEAD IN SOILS. THE IDENTIFIED EXPOSURE PATHWAYS FOR GROUNDWATER INCLUDE INGESTION (OF CONTAMINATED GROUNDWATER, FISH, BEEF AND CROPS), INHALATION (DUE TO SHOWERING AND OTHER HOUSEHOLD ACTIVITIES) AND DERMAL CONTACT. IT MUST BE NOTED THAT THESE PATHWAYS ARE ONLY APPLICABLE TO THE NO-ACTION SCENARIO. SINCE THE TREATMENT SYSTEMS HAVE BEEN OPERATING IN THE UPPER AQUIFER, NO CONTAMINATION HAS REACHED THE TULE RIVER AND DOMESTIC USE OF THE GROUNDWATER CEASED IN 1985 WHEN BECKMAN CONNECTED AFFECTED HOUSEHOLDS TO A PUBLIC WATER SUPPLY. THUS, INGESTION OF FISH, BEEF AND CROPS AND GROUNDWATER WOULD POSE A RISK ONLY IF THE NO-ACTION ALTERNATIVE WERE SELECTED.

THE EXPOSURE PATHWAYS FOR LEAD-CONTAMINATED SOIL INCLUDE DERMAL CONTACT AND INHALATION OF CONTAMINATED DUST.

THE EA CONCLUDED THAT THE EXPOSURE SCENARIOS PRESENTING THE HIGHEST RISK UNDER THE NO ACTION ALTERNATIVE WERE DIRECT CONSUMPTION OF CONTAMINATED GROUNDWATER AND INHALATION OF CONTAMINANTS VOLATILIZED FROM WATER WHILE SHOWERING.

THE THIRD STEP OF THE EA IS THE TOXICITY ASSESSMENT. CHEMICALS PRESENT AT THIS SITE INCLUDE BOTH CARCINOGENS AND NON-CARCINOGENS. TWO CONTAMINANTS ARE OF CONCERN BASED ON THEIR POTENTIAL ABILITY TO CAUSE CANCER: TCE IS A GROUP B2 AGENT, PROBABLE HUMAN CARCINOGEN, AND 1,1-DCE IS A GROUP C AGENT, POSSIBLE HUMAN CARCINOGEN. THESE CLASSIFICATIONS ARE BASED ON THE STRENGTH OF SCIENTIFIC EVIDENCE THAT THESE AGENTS MAY BE CARCINOGENIC. FOR TCE, THERE IS SUFFICIENT EVIDENCE OF CARCINOGENICITY IN ANIMALS AND INADEQUATE EVIDENCE THE COMPOUND IS CARCINOGENIC IN HUMANS. FOR 1,1-DCE, THERE IS ONLY LIMITED EVIDENCE THE COMPOUND IS CARCINOGENIC IN ANIMALS AND THE AVAILABLE EVIDENCE ON HUMANS IS INADEQUATE. CHEMICALS WHICH HAVE BEEN PROVEN TO CAUSE CANCER IN HUMANS ARE CLASSIFIED AS GROUP A AGENTS, KNOWN HUMAN CARCINOGENS. CANCER POTENCY FACTORS (CPFs) HAVE BEEN DEVELOPED BY EPA'S CARCINOGENIC ASSESSMENT GROUP (CAG) FOR ESTIMATING EXCESS LIFETIME CANCER RISKS ASSOCIATED WITH EXPOSURE TO POTENTIALLY CARCINOGENIC CHEMICALS (SEE TABLE 3 FOR TOXICITY INFORMATION). CPFs WHICH ARE EXPRESSED IN UNITS OF MG/KG-DAY ARE MULTIPLIED BY THE ESTIMATED INTAKE OF A POTENTIAL CARCINOGEN IN MG/KG/DAY TO PROVIDE AN UPPER BOUND ESTIMATE OF THE EXCESS LIFETIME CANCER RISK ASSOCIATED WITH EXPOSURE AT THAT INTAKE LEVEL. THE TERM "UPPER BOUND" REFLECTS THE CONSERVATIVE ESTIMATE OF THE RISKS CALCULATED FROM THE CPF. USE OF THIS APPROACH MAKES UNDERESTIMATION OF THE ACTUAL CANCER RISKS HIGHLY
UNLIKELY, CANCER POTENCY FACTORS ARE DERIVED FROM THE RESULTS OF HUMAN EPIDEMIOLOGICAL STUDIES OR CHRONIC ANIMAL BIOASSAYS TO WHICH ANIMAL-TO-HUMAN EXTRAPOLATION AND UNCERTAINTY FACTORS HAVE BEEN APPLIED.

SEVERAL NON-CARCINOGENIC CHEMICALS HAVE BEEN IDENTIFIED TO BE CHEMICALS OF CONCERN AT THIS SITE. REFERENCE DOSES (RFDS) HAVE BEEN DEVELOPED BY EPA FOR INDICATING THE POTENTIAL FOR ADVERSE HEALTH EFFECTS FROM EXPOSURE TO CHEMICALS EXHIBITING NON-CARCINOGENIC EFFECTS. THE REFERENCE DOSE IS AN ESTIMATE, WITH AN UNCERTAINTY OF PERHAPS AN ORDER OF MAGNITUDE, OF A LIFETIME DAILY EXPOSURE FOR THE ENTIRE POPULATION (INCLUDING SENSITIVE INDIVIDUALS) THAT IS EXPECTED TO BE WITHOUT APPRECIABLE RISK OF DELETERIOUS EFFECTS. ESTIMATED INTAKE OF CHEMICALS FROM ENVIRONMENTAL MEDIA (E.G., THE AMOUNT OF A CHEMICAL INGESTED FROM CONTAMINATED DRINKING WATER) CAN BE COMPARED TO THE RFDS. RFDS ARE DERIVED FROM HUMAN EPIDEMIOLOGICAL STUDIES OR ANIMAL STUDIES TO WHICH UNCERTAINTY FACTORS HAVE BEEN APPLIED (E.G., TO ACCOUNT FOR THE USE OF ANIMAL DATA TO PREDICT EFFECT ON HUMANS). THESE UNCERTAINTY FACTORS HELP ENSURE THAT THE RFDS WILL NOT UNDERESTIMATE THE POTENTIAL FOR ADVERSE NON-CARCINOGENIC EFFECTS TO OCCUR.

THE LAST STEP IN THE ENDANGERMENT ASSESSMENT PROCESS IS THE RISK CHARACTERIZATION. AT THIS POINT THE INFORMATION FROM THE PROCEEDING STEPS IS COMBINED TO DETERMINE IF AN EXCESS HEALTH RISK IS PRESENT AT THE SITE. EXCESS LIFETIME CANCER RISKS ARE DETERMINED BY MULTIPLYING THE INTAKE LEVEL WITH THE CANCER POTENCY FACTORS. THESE RISKS ARE PROBABILITIES THAT ARE GENERALLY EXPRESSED IN SCIENTIFIC NOTATION (E.G., 1X10(-6)). AN EXCESS LIFETIME CANCER RISK OF 1X10(-6) INDICATES THAT, AS A PLASIBLE UPPER-BOUND, AN INDIVIDUAL HAS A ONE IN ONE MILLION CHANCE OF DEVELOPING CANCER AS A RESULT OF SITE EXPOSURE TO A CARCINOGEN OVER A SEVENTY YEAR LIFETIME UNDER THE SPECIFIC EXPOSURE CONDITIONS AT A SITE.

THE EA ESTIMATED THAT THE LIFETIME CANCER RISK TO THE MAXIMALLY EXPOSED INDIVIDUAL WHO DRINKS AND SHOWERS WITH WATER FROM THE UPPER AQUIFER (CONTAINING CONCENTRATIONS OF CARCINOGENS PRESENT IN AUGUST, 1986) IS APPROXIMATELY 6 CHANCES IN 10,000 OR 6X10(-4). BECAUSE THE PUMP AND TREATMENT SYSTEM HAS BEEN OPERATING SINCE AUGUST, 1986 TO DECREASE THE CONCENTRATIONS OF CARCINOGENS IN THE GROUNDWATER, THE ASSOCIATED RISKS ARE DECREASING. DRINKING AND SHOWERING ARE THE EXPOSURE PATHWAYS WHICH ARE ASSOCIATED WITH EXCESS RISK (GREATER THAN 10(-6)). THIS CANCER RISK IS PRIMARILY FROM DCE (A CLASS C CARCINOGEN). THE EA ALSO ESTIMATED THAT LIFETIME CANCER RISK DUE TO DRINKING AND SHOWERING WITH WATER FROM THE LOWER AQUIFER WAS ABOUT 1.6 CHANCES IN 1000 OR 1.6X10(-3) BASED ON THE AUGUST, 1986 CONCENTRATION LEVELS. THE AQUIFAR WAS NOT USED IN RISK CALCULATIONS BECAUSE IT IS NOT A PRODUCTIVE AQUIFER AND IS NOT EXPECTED TO PROVIDE A SIGNIFICANT SOURCE OF GROUNDWATER TO DOMESTIC WELLS. HOWEVER, IT IS OF CONCERN TO EPA AS A CONTINUING SOURCE OF CONTAMINATION. ACTUAL CURRENT RISKS ARE ESSENTIALLY ZERO AS CONTAMINATED GROUNDWATER IS NOT CURRENTLY BEING USED FOR DOMESTIC PURPOSES.

POTENTIAL CONCERN FOR NON-CARCINOGENIC EFFECT OF A SINGLE CONTAMINANT IN A SINGLE MEDIUM IS EXPRESSED AS A HAZARD QUOTIENT (HQ) (OR THE RATIO OF THE ESTIMATED INTAKE DERIVED FROM THE CONTAMINANT CONCENTRATIONS IN A GIVEN MEDIUM TO THE CONTAMINANT’S REFERENCE DOSE). BY ADDING THE HQS FOR ALL CONTAMINANTS WITHIN A MEDIUM OR ACROSS ALL MEDIA TO WHICH A GIVEN POPULATION MAY REASONABLY BE EXPOSED, THE HAZARD INDEX (HI) CAN BE
GENERATED. THE HI PROVIDES A USEFUL REFERENCE POINT FOR GAUGING THE
POTENTIAL SIGNIFICANCE OF MULTIPLE CONTAMINANT'S EXPOSURES WITHIN A
SINGLE MEDIUM OR ACROSS MEDIA. IF THE RATIO EXCEEDS 1 FOR ANY CHEMICAL,
FOR ANY ROUTE OF EXPOSURE, THERE IS PRESENTED TO BE A RISK OF NON-
CARCINOGENIC EFFECTS AT THAT EXPOSURE POINT.

THE EA CONCLUDED THE EXPOSURE ROUTE WHICH HAS A POTENTIAL FOR
PRODUCING NON-CARCINOGENIC EFFECTS IS SHOWING WITH DCE-CONTAMINATED
WATER AT THE HIGHEST CONCENTRATIONS FOUND IN THE UPPER AQUIFER AS OF
AUGUST, 1986. ALL ORAL AND INHALATION DOSES FOR DCA, 1,1,1 TCA AND TCE DO
NOT PRESENT A RISK OF NON-CARCINOGENIC EFFECTS FOR THE EXPOSURE
SCENARIOS EVALUATED IN THE EA.

LEAD IN SOIL WAS ALSO IDENTIFIED AS A SITE CHEMICAL OF CONCERN THAT POSES A
THREAT TO PUBLIC HEALTH AND THE ENVIRONMENT. A SOIL LEAD CONCENTRATION
OF 1,280 MG/KG WAS DETECTED. LEAD CONTAMINATED SOIL POSES A HEALTH RISK
THROUGH DIRECT CONTACT, INHALATION, AND INGESTION ROUTES OF EXPOSURE.
EPA HAS DETERMINED THAT LEAD SOIL CONCENTRATIONS EXCEEDING 200 MG/KG
POSE A SIGNIFICANT HEALTH THREAT TO CHILDREN AND OTHER SEGMENTS OF THE
HUMAN POPULATION, AND THUS HAS BEEN SELECTED AS THE CLEANUP LEVEL FOR
LEAD IN SOILS. PREVENTION OF DIRECT CONTACT AND ELIMINATION OF DUST
PRODUCTION IS A PRIMARY REMEDIAL OBJECTIVE FOR CONTAMINATED SOILS.

VII. DESCRIPTION OF ALTERNATIVES

TO FACILITATE THE DETAILED ANALYSIS OF ALTERNATIVES, THE SITE WAS
SEPARATED INTO THREE AREAS FOR REMEDIAL PURPOSES. THESE THREE AREAS
ARE: (1) UPPER AQUIFER; (2) LOWER AQUIFER AND UPPER AQUIFARD; AND (3) LEAD-
CONTAMINATED SOILS. THE REMEDIAL ALTERNATIVES FOR THESE THREE AREAS ARE
DESCRIBED BELOW.

UPPER AQUIFER REMEDIAL ALTERNATIVES

FIVE ALTERNATIVES WERE EVALUATED FOR GROUNDWATER CONTAMINATION IN THE
UPPER AQUIFER. THESE INCLUDE NO ACTION (ALTERNATIVE G-1); INSTITUTIONAL
CONTROLS (ALTERNATIVE G-2); GROUNDWATER COLLECTION, AIR STRIPPING
TREATMENT, AND DISCHARGE (ALTERNATIVE G-3A); GROUNDWATER COLLECTION,
CARBON ADSORPTION TREATMENT, AND DISCHARGE (ALTERNATIVE G-3C); AND,
GROUNDWATER COLLECTION, CARBON ADSORPTION TREATMENT AND REINJECTION
(ALTERNATIVE G-4).

THE NO ACTION ALTERNATIVE (G-1) REPRESENTS BASELINE CONDITIONS AGAINST
WHICH OTHER ALTERNATIVES ARE COMPARED. UNDER NO ACTION, UNRESTRICTED
ACCESS WOULD BE ALLOWED TO THE UPPER AQUIFER AND THE EXISTING PUMP AND
TREATMENT SYSTEM WOULD BE TERMINATED.

ALTERNATIVE G-2 (INSTITUTIONAL CONTROLS) WOULD CONSIST OF CONTINUED
MONITORING OF GROUNDWATER QUALITY AND RESTRICTING ACCESS THROUGH
CONTROLS ON PUMPING AND NEW WELL INSTALLATION. EXISTING CONTAINMENT AND
TREATMENT WOULD CEASE. ALTERNATIVE G-3 (COLLECTION, TREATMENT, AND
DISCHARGE) CONSISTS OF A COMBINATION OF PUMPING WELLS TO COLLECT
GROUNDWATER, TREATMENT OF GROUNDWATER TO REMOVE VOLATILES, AND
DISCHARGE TO EXISTING INFILTRATION BASINS OR IRRIGATED FIELDS. THE EXISTING
EXTRACTION WELLFIELD WOULD BE USED TO COLLECT GROUNDWATER. TREATMENT
WOULD BE EITHER THROUGH AIR STRIPPING OR CARBON ADSORPTION. THE AIR STRIPPING ALTERNATIVE IS IDENTIFIED AS ALTERNATIVE G-3A AND THE CARBON ADSORPTION OPTION AS G-3C.

ALTERNATIVE G-4 (COLLECTION, TREATMENT AND REINJECTION) WOULD CONSIST OF COLLECTION, TREATMENT AND RECHARGE OF TREATED WATER USING THE EXISTING EXTRACTION WELLFIELD, CARBON ADSORPTION TREATMENT, AND RECHARGE THROUGH INJECTION WELLS.

LOWER AQUIFER AND UPPER AQUIFARD

SIX REMEDIAL ALTERNATIVES WERE EVALUATED FOR THE LOWER AQUIFER AND UPPER AQUIFARD. THESE INCLUDE THE NO ACTION (ALTERNATIVE LG-1); INSTITUTIONAL CONTROLS (ALTERNATIVE LG-2); EXTRACTION, TREATMENT, AND RECHARGE OF UPPER AQUIFARD ONLY (LG-3); EXTRACTION, TREATMENT, AND RECHARGE OF LOWER AQUIFARD ONLY (LG-4); COMBINED EXTRACTION, TREATMENT, AND RECHARGE OF UPPER AQUIFARD AND LOWER AQUIFARD (LG-5); AND, UPPER AQUIFARD IN-SITU BIOREMEDIATION (ALTERNATIVE LG-6).

THE NO ACTION ALTERNATIVE (LG-1) REPRESENTS THE BASELINE CONDITIONS AGAINST WHICH THE OTHER ALTERNATIVES ARE COMPARED. UNDER NO ACTION UNRESTRICTED ACCESS TO THE AQUIFARD AND LOWER AQUIFARD WILL EXIST AND NO ATTEMPTS TO REMOVE OR CONTAIN THE CONTAMINATED AQUIFARD WILL BE MADE.

ALTERNATIVE LG-2 (INSTITUTIONAL CONTROLS) WOULD INCLUDE CONTINUED MONITORING OF GROUNDWATER QUALITY, INSTALLATION OF ADDITIONAL MONITORING WELLS, AND PREVENTING ACCESS TO CONTAMINATED GROUNDWATER THROUGH RESTRICTIONS ON PUMPING AND WELL INSTALLATION.

ALTERNATIVE LG-3 (UPPER AQUIFARD EXTRACTION, TREATMENT, AND DISCHARGE) WOULD INVOLVE INSTALLATION OF AN EXTRACTION WELLFIELD WITH WELLS SCREENED INTO THE UPPER AQUIFARD, TREATING EXTRACTED GROUNDWATER IN THE EXISTING AIR STRIPPING SYSTEM, AND DISCHARGING THE TREATED WATER INTO THE EXISTING INFILTRATION BASINS OR IRRIGATED FIELDS. ALTERNATIVE LG-3 INVOLVES REMEDIATION OF THE UPPER AQUIFARD ONLY.

ALTERNATIVE LG-4 (LOWER AQUIFARD EXTRACTION, TREATMENT, AND DISCHARGE) WOULD INVOLVE INSTALLATION OF AN EXTRACTION WELLFIELD WITH WELLS SCREENED IN THE LOWER AQUIFARD, TREATING EXTRACTED GROUNDWATER IN THE EXISTING AIR STRIPPING SYSTEM, AND DISCHARGING THE TREATED WATER INTO THE EXISTING INFILTRATION BASINS OR IRRIGATED FIELDS. ALTERNATIVE LG-4 INVOLVES REMEDIATION OF THE LOWER AQUIFARD ONLY.

ALTERNATIVE LG-5 (LOWER AQUIFARD AND UPPER AQUIFARD EXTRACTION, TREATMENT, AND DISCHARGE) WOULD INVOLVE INSTALLATION OF EXTRACTION WELLS SCREENED INTO BOTH THE UPPER AQUIFARD AND LOWER AQUIFARD, TREATING EXTRACTED GROUNDWATER IN THE EXISTING AIR STRIPPING SYSTEM, AND DISCHARGING THE TREATED WATER INTO THE EXISTING INFILTRATION BASINS OR IRRIGATED FIELDS.

ALTERNATIVE LG-6 (IN-SITU BIOREMEDIATION) CONSISTS OF IN-SITU AEROBIC BIOREMEDIATION OF THE AQUIFARD AND WOULD INCLUDE AN INJECTION SYSTEM, AN EXTRACTION SYSTEM, AND A SURFACE TREATMENT FACILITY.

SOIL REMEDIATION
THREE REMEDIAL ACTION ALTERNATIVES WERE DEVELOPED FOR THE LEAD-
CONTAMINATED SOIL. THESE INCLUDE NO ACTION (ALTERNATIVE S-1); EXCAVATION
AND DISPOSAL (ALTERNATIVE S-3); AND EXTRACTION, TREATMENT, AND DISPOSAL
(ALTERNATIVE S-4).

THE NO ACTION ALTERNATIVE (S-1) FORMS THE BASIS AGAINST WHICH THE OTHER
ALTERNATIVES ARE COMPARED. UNDER NO ACTION, NO REMEDIAL ACTION WOULD
OCUR AND UNRESTRICTED ACCESS TO CONTAMINATED SOILS WOULD BE ALLOWED.

ALTERNATIVE’S-3 (EXCAVATION AND DISPOSAL) WOULD CONSIST OF EXCAVATION
AND OFFSITE DISPOSAL AT A HAZARDOUS WASTE FACILITY OF CONTAMINATED SOIL.
NO TREATMENT TO REDUCE TOXICITY, MOBILITY, OR VOLUME WOULD BE
PERFORMED.

ALTERNATIVE S-4 (EXTRACTION, TREATMENT, AND DISPOSAL) WOULD CONSIST OF
EXCAVATION, ON-SITE TREATMENT, FOLLOWED BY OFFSITE DISPOSAL AT AN
APPROPRIATE FACILITY. TREATMENT WOULD CONSIST OF CEMENT SOLIDIFICATION
OR SILICATE-BASED STABILIZATION. TREATABILITY TESTS WOULD BE PERFORMED
DURING THE REMEDIAL DESIGN TO DETERMINE THE MOST APPROPRIATE TREATMENT.
THE TREATED SOIL COULD THEN GO THROUGH WASTE CHARACTERIZATION AND
DELISTING WHICH COULD ALLOW ITS DISPOSAL AS NON-HAZARDOUS.

VIII. SUMMARY OF COMPARATIVE ANALYSIS OF ALTERNATIVES

THIS SECTION PRESENTS A COMPARISON OF ALTERNATIVES USING NINE COMPONENT
CRITERIA. THESE CRITERIA, WHICH ARE LISTED BELOW, ARE DERIVED FROM SECTION
300.68(H)(2) OF THE NATIONAL CONTINGENCY PLAN; CERCLA SECTIONS 121(B) AND
121(C).

1. PROTECTION OF HUMAN HEALTH AND THE ENVIRONMENT
2. COMPLIANCE WITH APPLICABLE OR RELEVANT AND APPROPRIATE
   REQUIREMENTS (ARARS)
3. REDUCTION OF TOXICITY, MOBILITY, OR VOLUME
4. LONG-TERM EFFECTIVENESS AND PERMANENCE
5. SHORT-TERM EFFECTIVENESS
6. IMPLEMENTABILITY
7. COST
8. STATE ACCEPTANCE
9. COMMUNITY ACCEPTANCE

UNDER SECTION 121 OF CERCLA, AS AMENDED BY THE SUPERFUND AMENDMENTS
AND REAUTHORIZATION ACT (SARA), THE BASIC CLEANUP OBJECTIVE IS TO CHOOSE A
REMedy THAT IS PROTECTIVE OF PUBLIC HEALTH AND THE ENVIRONMENT, THAT IS
COST EFFECTIVE, AND UTILIZES PERMANENT SOLUTIONS AND ALTERNATIVE
TREATMENT TECHNOLOGIES TO THE MAXIMUM EXTENT PRACTICABLE. SECTION
121(D) ALSO REQUIRES THAT REMEDIAL ACTIONS COMPLY WITH ARARS. ARARS FOR
THIS SITE HAVE BEEN IDENTIFIED IN THE ADMINISTRATIVE RECORD (DOCUMENT #78)
AND ARE DISCUSSED IN SECTION 1.5 OF THE FEASIBILITY STUDY. IN PARTICULAR,
MCLS UNDER THE SAFE DRINKING WATER ACT ARE CONSIDERED ARARS FOR THIS
SITE AND HAVE BEEN SELECTED AS CLEANUP GOALS (SEE SECTION ON THE
SELECTED REMEDY). OTHER SIGNIFICANT ARARS INCLUDE REQUIREMENTS UNDER
THE RESOURCE CONSERVATION AND RECOVERY ACT AND STATE REQUIREMENTS
UNDER THE AIR RESOURCES ACT, CALIFORNIA SAFE DRINKING WATER ACT AND
PORTER COLOGNE WATER QUALITY ACT.
UPPER AQUIFER REMEDIAL ACTION ALTERNATIVES

THE NO ACTION ALTERNATIVE (G-1) WOULD PROVIDE NO PROTECTION OF HUMAN HEALTH OR THE ENVIRONMENT AND WOULD NOT EMPLOY TREATMENT TO REDUCE TOXICITY, MOBILITY, OR VOLUME. CONTAMINANTS WOULD CONTINUE TO MOVE IN THE ENVIRONMENT AND WOULD DISPERSE AND DEGRADE USING NATURAL MECHANISMS. BECAUSE THE EXISTING PUMP AND TREATMENT SYSTEM WOULD CEASE TO OPERATE, THE VOLUME OF CONTAMINATED MEDIA WOULD INCREASE WHILE ADESION AND DISPERSION OCCURRED. THE NO ACTION ALTERNATIVE WOULD NOT COMPLY WITH ARARS. THE ALTERNATIVE OFFERS NO SHORT-TERM EFFECTIVENESS, BUT BECAUSE NATURAL ADESION AND DISPERION OF CONTAMINANTS WILL REDUCE GROUNDWATER CONCENTRATIONS TO MCLS IN AN ESTIMATED 1 TO 2 YEARS, THE ALTERNATIVE DOES OFFER LIMITED LONG-TERM EFFECTIVENESS. THE NO ACTION ALTERNATIVE COULD BE EASILY IMPLEMENTED, IT DOES NOT INVOLVE IMPLEMENTATION OF A TECHNOLOGY, AND WOULD BE OF MINIMAL COST. THE ALTERNATIVE WOULD PROBABLY NOT BE ACCEPTABLE TO THE STATE OR THE COMMUNITY, AND WOULD NOT MEET THE FOUR STATUTORY DETERMINATION OF A CERCLA REMEDY.

IMPLEMENTATION OF INSTITUTIONAL CONTROLS AND CONTINUED GROUNDWATER MONITORING (ALTERNATIVE G-2) WOULD PROVIDE SOME PROTECTION TO PUBLIC HEALTH AND THE ENVIRONMENT BECAUSE ACCESS TO CONTAMINATED GROUNDWATER WOULD BE LIMITED. LIKE THE NO ACTION ALTERNATIVE, CONTAMINANTS WOULD BE ALLOWED TO NATURALLY DISPERSE. HOWEVER, THE ALTERNATIVE WOULD NOT EMPLOY TREATMENT TO REDUCE TOXICITY, MOBILITY, OR VOLUME. ALTERNATIVE G-2 WOULD NOT COMPLY WITH ARARS. THE ALTERNATIVE OFFERS SHORT-TERM EFFECTIVENESS ONLY THROUGH THE EFFECTIVENESS OF ENFORCEMENT OF THE INSTITUTIONAL CONTROLS. IT DOES NOT MEET THE CRITERIA OF PERFORMANCE OR LONG TERM EFFECTIVENESS. LIKE THE NO ACTION ALTERNATIVE, CONCENTRATIONS OF CONTAMINANTS IN GROUNDWATER WOULD ACHIEVE MCL GOALS IN 1 TO 2 YEARS. ALTERNATIVE G-2 IS PERCEIVED TO BE MORE ACCEPTABLE TO THE STATE AND COMMUNITY THAN THE NO ACTION ALTERNATIVE, BUT IS ALSO PERCEIVED TO BE LESS ACCEPTABLE TO CONTINUATION OF THE PRESENT PUMP AND TREATMENT SYSTEM. PRESENT WORTH COST FOR CONTINUED MONITORING UNTIL MCLS ARE ACHIEVED IS APPROXIMATELY $594,000.

CONTINUATION OF THE EXISTING PUMP AND TREATMENT SYSTEM USING AIR STRIPPING TO REMOVE CONTAMINANTS FROM EXTRACTED GROUNDWATER (ALTERNATIVE G-3A) WOULD BE PROTECTIVE OF PUBLIC HEALTH AND THE ENVIRONMENT THROUGH REMOVAL AND DISPERSION CONTROL OF CONTAMINATED GROUNDWATER. THE ALTERNATIVE OFFERS SHORT AND LONG TERM EFFECTIVENESS BECAUSE IT IS ESTIMATED TO TAKE LESS THAN 1 YEAR FOR CONTAMINATION LEVELS TO ACHIEVE MCL GOALS. THE ALTERNATIVE IS READILY IMPLEMENTABLE THROUGH USE OF THE EXISTING PUMP AND TREATMENT SYSTEM. ALTHOUGH AIR STRIPPING WILL TREAT GROUNDWATER TO REDUCE VOLUME OF CONTAMINATED WATER, AIR STRIPPING IS A MEDIA TRANSFER PROCESS (WATER TO AIR) AND CONTAMINANTS ARE NOT DESTROYED. THIS TREATMENT PROCESS HAS THE POTENTIAL FOR EXPOSURE TO SITE CHEMICALS THROUGH INHALATION OF CONTAMINATED AIR, BUT ALL APPLICABLE AIR QUALITY CRITERIA RELATING TO VOC EMISSIONS WILL BE MET. THE PRESENT AIR-STRIPPING TREATMENT SYSTEM HAS BEEN PERMITTED BY THE TULARE COUNTY AIR POLLUTION CONTROL DISTRICT (TCPACD). ALTHOUGH THIS IS A NON-ATTAINMENT AREA, THE CURRENT AIR EMISSIONS FOR THE SITE MEET EPA NATIONAL POLICY LEVELS OF 15 POUNDS PER DAY OR LESS. THE ALTERNATIVE WILL ADDRESS ALL ARARS FOR THE SITE. PRESENT WORTH COST TO ACHIEVE MCL GOALS IS $571,000. ALTERNATIVE (G-3) IS PERCEIVED
TO BE MORE ACCEPTABLE TO THE STATE AND LOCAL COMMUNITY THAN THE NO ACTION ALTERNATIVE.

ALTERNATIVE G-3C WOULD EMPLOY ACTIVATED CARBON TO REMOVE VOCs FROM EXTRACTED GROUNDWATER. ALTERNATIVE G-3C WOULD OFFER GREATER PUBLIC HEALTH PROTECTIVENESS THAN G-3A BECAUSE VOCs WOULD NOT BE RELEASED INTO THE AIR. TREATMENT USING CARBON ADSORPTION WOULD FURTHER REDUCE MOBILITY AND VOLUME OF CONTAMINATED MEDIA. THE ALTERNATIVE WOULD TAKE APPROXIMATELY 1 YEAR TO ACHIEVE MCLs IN THE CONTAMINATED UPPER AQUIFER. ALTERNATIVE G-3C WOULD HAVE HIGHER COSTS THAN G-3A DUE TO THE NEED TO HANDLE, REPRESS, OR DISPOSE OF THE CARBON ADSORPTION MEDIA. PRESENT WORTH COSTS ARE ESTIMATED AT $1,188,000. THE ALTERNATIVE WOULD COMPLY WITH ALL ARARS AND WOULD BE READILY IMPLEMENTABLE. THE ALTERNATIVE IS PERCEIVED TO BE ACCEPTABLE TO THE STATE AND LOCAL COMMUNITY.

LOWER AQUIFER/AQUITARD REMEDIAL ALTERNATIVES THE NO ACTION ALTERNATIVE (LG-1) WOULD OFFER NO PROTECTION TO PUBLIC HEALTH AND THE ENVIRONMENT. IT WOULD NOT BE EFFECTIVE IN REDUCING MOBILITY OR VOLUME OF CONTAMINATION AND IT WOULD TAKE AN ESTIMATED 200 YEARS FOR NATURAL DISPERSAL AND DEGRADATION MECHANISMS TO REDUCE AQUIFER/AQUITARD CONCENTRATIONS TO BELOW MCLs. THE NO ACTION ALTERNATIVE WOULD NOT COMPLY WITH ARARS. THE ALTERNATIVE IS IMPLEMENTABLE AND WOULD BE OF MINIMAL COST. THE ALTERNATIVE IS NOT LIKELY TO BE ACCEPTABLE TO THE STATE OR LOCAL COMMUNITY, AND WOULD NOT MEET THE FOUR STATUTORY CRITERIA FOR A CERCLA REMEDY.

THE INSTITUTIONAL CONTROL ALTERNATIVE (LG-2) WOULD OFFER SOME PROTECTION TO PUBLIC HEALTH, BUT EFFECTIVENESS WOULD BE RELATED TO THE EFFECTIVENESS OF THE CONTROLS. BECAUSE THE ALTERNATIVE RELIES ON NATURAL DISPERSAL AND DEGRADATION MECHANISMS TO ACHIEVE MCLs, INSTITUTIONAL CONTROLS WOULD NEED TO BE ENFORCED FOR MORE THAN 200 YEARS. IMPLEMENTATION OF INSTITUTIONAL CONTROLS FOR 200 YEARS HAS NEVER BEEN TESTED OR PROVEN FOR A WASTE DISPOSAL SITE, THEREFORE IMPLEMENTABILITY IS UNKNOWN. THE ALTERNATIVE DOES NOT EMPLOY A TECHNOLOGY TO REDUCE TOXICITY, MOBILITY, OR VOLUME OF CONTAMINATION. VOLUME OF CONTAMINATED MEDIA WOULD INCREASE AS THE VOCs CONTINUED TO MOVE UNABATED IN THE AQUIFER. THE ALTERNATIVE WOULD NOT COMPLY WITH ARARS. THE ALTERNATIVE IS BELIEVED TO BE UNACCEPTABLE TO THE STATE AND LOCAL COMMUNITY.

ALTERNATIVE LG-3 (UPPER AQUIFER EXTRACTION, TREATMENT, AND DISCHARGE) WOULD CONSIST OF EXTRACTING AND TREATING WATER REMOVED FROM THE UPPER AQUIFER IN THE EXISTING AIR STRIPPING UNIT. THIS ALTERNATIVE ADDRESSES THE UPPER AQUIFER WHICH IS THE SOURCE OF CONTAMINATION FOR THE LOWER AQUIFER, BUT WOULD NOT BE EFFECTIVE IN REMEDIATING THE LOWER AQUIFER WHICH IS A DRINKING WATER SOURCE. THE ALTERNATIVE OFFERS MINIMAL SHORT-TERM PUBLIC HEALTH PROTECTION FOR THE LOWER AQUIFER BECAUSE THE LOWER AQUIFER WOULD REMAIN CONTAMINATED FOR 100 TO 150 YEARS. LONG-TERM EFFECTIVENESS WOULD BE ACHIEVED ONLY THROUGH NATURAL PROCESSES. THE ALTERNATIVE WOULD REDUCE MOBILITY AND VOLUME OF CONTAMINATED MEDIA IN THE AQUIFER, BUT WITH THE EXCEPTION OF SOURCE CONTROL, IT WOULD NOT BE EFFECTIVE FOR THE LOWER AQUIFER. TREATMENT VIA AIR STRIPPING IS A MEDIA TRANSFER PROCESS AND CONTAMINANTS WOULD NOT BE DIRECTLY DESTROYED THROUGH TREATMENT. IT IS EXPECTED THAT THE TCAPCD WOULD PERMIT THESE AIR RELEASES. ARARS WOULD BE ACHIEVED FOR THE AQUIFER ONLY. PRESENT WORTH COSTS FOR THIS ALTERNATIVE ARE ESTIMATED AT $4,178,000. THE
ALTERNATIVE IS IMPLEMENTABLE THROUGH AVAILABLE GROUNDWATER RECOVERY TECHNOLOGIES AND THE EXISTING AIR STRIPPING SYSTEM. TREATED WATER WOULD BE DISCHARGED TO THE ON-SITE INFILTRATION BASINS AND/OR USED FOR LOCAL AGRICULTURAL IRRIGATION. STATE AND COMMUNITY ACCEPTANCE IS PERCEIVED TO BE LOW DUE TO THE LENGTH OF TIME THE LOWER AQUIFER WOULD REMAIN CONTAMINATED.

ALTERNATIVE LG-4 (LOWER AQUIFER EXTRACTION, TREATMENT, AND DISCHARGE) CONSISTS OF EXTRACTION AND TREATMENT OF LOWER AQUIFER GROUNDWATER USING THE EXISTING AIR STRIPPING SYSTEM. TREATED WATER WOULD BE DISCHARGED TO THE ON-SITE INFILTRATION BASINS AND/OR USED FOR LOCAL IRRIGATION. THE ALTERNATIVE ADDRESSES THE LOWER AQUIFER WHICH IS A DRINKING WATER SOURCE, BUT WOULD NOT REMEDY THE AQUITARD, WHICH IS THE SOURCE OF CONTAMINATION FOR THE LOWER AQUIFER. THE ALTERNATIVE WOULD OFFER SOME PROTECTION OF PUBLIC HEALTH THROUGH CONTAINMENT OF THE PLUME. SHORT-TERM EFFECTIVENESS WOULD BE DEPENDENT ON PLUME CONTROL AND PREVENTION OF ACCESS TO THE CONTAMINATED PORTION OF THE AQUIFER. LONG-TERM EFFECTIVENESS IS ESTIMATED TO BE ACHIEVED IN 30 TO 40 YEARS WHEN CONTAMINANT CONCENTRATIONS IN THE AQUIFER ARE PREDICTED TO BE REDUCED TO MCLs. THE ALTERNATIVE WOULD CONTROL MOVEMENT AND CONTAIN THE VOLUME OF CONTAMINATED GROUNDWATER. TREATMENT VIA AIR STRIPPING IS A MEDIA TRANSFER PROCESS AND CONTAMINANTS WOULD NOT BE DESTROYED BY DIRECT TREATMENT. IT IS EXPECTED THAT THE TCAPCD WOULD PERMIT THE AIR RELEASES. ARARS WOULD BE ADDRESSED BY ALTERNATIVE LG-4. PRESENT WORTH COST FOR ALTERNATIVE LG-4 IS ESTIMATED AT $3,344,000. THE ALTERNATIVE IS PERCEIVED TO BE LESS ACCEPTABLE TO THE STATE AND COMMUNITY THAN ALTERNATIVE LG-5 WHICH WOULD PRODUCE REDUCED REMEDIATION TIME DUE TO CONCURRENT LOWER AQUIFER/AQUITARD REMEDIATION.

ALTERNATIVE LG-5 (CONCURRENT UPPER AQUITARD/LOWER AQUIFER EXTRACTION, TREATMENT, AND DISCHARGE) IS A COMBINATION OF ALTERNATIVES LG-3 AND LG-4. THIS ALTERNATIVE OFFERS GREATER PUBLIC HEALTH PROTECTION THROUGH CONTROL OF THE SOURCE AND CONTAMINANT PLUME. THE ALTERNATIVE IS ESTIMATED TO ACHIEVE MCLs IN THE LOWER AQUIFER IN APPROXIMATELY 25 YEARS AND WOULD BE EFFECTIVE IN THE LONG TERM. SHORT-TERM EFFECTIVENESS WOULD BE RELATED TO CONTROL OF EMISSIONS FROM THE AIR STRIPPING SYSTEM AND CONTROL OF ACCESS TO THE AQUIFER. THE ALTERNATIVE IS EASILY IMPLEMENTED USING AVAILABLE GROUNDWATER EXTRACTION TECHNOLOGY AND COULD USE THE EXISTING AIR STRIPPING SYSTEM. THE TREATED WATER WOULD BE DISCHARGED TO THE INFILTRATION BASINS AND/OR USED FOR IRRIGATION. THE ALTERNATIVE WOULD EFFECTIVELY REDUCE MOBILITY AND VOLUME OF CONTAMINATED MEDIA. TREATMENT WOULD BE A MEDIA TRANSFER PROCESS AND CONTAMINANTS WOULD NOT BE DIRECTLY DESTROYED. IT IS EXPECTED THAT THE TCAPCD WOULD PERMIT THE AIR RELEASES. PRESENT WORTH COST IS ESTIMATED AT $3,928,000. THE ALTERNATIVE IS PERCEIVED TO BE ACCEPTABLE TO THE STATE AND LOCAL COMMUNITY.

ALTERNATIVE LG-6 (IN-SITU BIOREMEDIATION) WOULD CONSIST OF AEROBIC BIOREMEDIATION OF CONTAMINATED PORTIONS OF THE AQUITARD. THE ALTERNATIVE WOULD REQUIRE TREATABILITY STUDIES AND IT IS NOT KNOWN WHETHER IT COULD BE IMPLEMENTABLE. THE ALTERNATIVE WOULD BE EFFECTIVE FOR THE AQUITARD, AND WOULD ADDRESS THE AQUIFER ONLY THROUGH REDUCTION OF RELEASE OF VOCS INTO THE LOWER AQUIFER. THE TIME PERIOD OF REMEDIATION
IS NOT KNOWN, BUT THE REMEDY MAY TAKE UP TO 100 YEARS TO ACHIEVE ARARS IN THE LOWER AQUIFER. SHORT-TERM EFFECTIVENESS WOULD BE RELATED TO THE ABILITY TO PREVENT ACCESS TO THE LOWER AQUIFER. THE ALTERNATIVE COULD RESULT IN REDUCTION OF TOXICITY, MOBILITY, AND VOLUME OF CONTAMINATED GROUNDWATER. COSTS FOR IMPLEMENTATION ARE UNKNOWN. DUE TO THE UNCERTAINTIES ASSOCIATED WITH THE ALTERNATIVE, THE ALTERNATIVE IS NOT PERCEIVED TO BE ACCEPTABLE TO THE STATE AND THE LOCAL COMMUNITY.

SOILS REMEDIAL ALTERNATIVES

ALTERNATIVE S-1 (NO ACTION) WOULD ALLOW UNRESTRICTEDACCESS TO THE AREA WITH SOIL CONTAMINATION AND THEREFORE OFFERS NO PUBLIC HEALTH PROTECTION. BECAUSE CONTAMINATION WOULD REMAIN INDEFINITELY, THE NO ACTION ALTERNATIVE WOULD NOT BE EFFECTIVE IN THE SHORT OR LONG TERMS. NO ACTION WOULD NOT EMPLOY TREATMENT TO REDUCE TOXICITY, MOBILITY, OR VOLUME. THE ALTERNATIVE IS READILY IMPLEMENTABLE AND COSTS WOULD BE MINIMAL. THE ALTERNATIVE IS PERCEIVED TO BE UNACCEPTABLE TO THE STATE AND LOCAL COMMUNITY.

ALTERNATIVE S-3 (EXCAVATION AND OFF-SITE DISPOSAL) WOULD BE EASILY IMPLEMENTED, PROVIDE IMMEDIATE (SHORT-TERM) PROTECTION OF PUBLIC HEALTH, AND PROVIDE LONG-TERM EFFECTIVENESS FOR THE SITE. THE ALTERNATIVE WOULD COMPLY WITH ARARS INCLUDING THE LAND BAN RESTRICTIONS. SINCE DISPOSAL OCCURRED PRIOR TO NOVEMBER, 1980, THE LEAD-CONTAMINATED SOIL WOULD NOT BE CONSIDERED A LISTED RCRA WASTE, HOWEVER, IT MAY BE A CHARACTERISTIC WASTE. IT WILL BE DETERMINED DURING REMEDIAL DESIGN WHETHER OR NOT THE LEAD CONTAMINATED SOIL IS A CHARACTERISTIC WASTE. IF IT IS DETERMINED TO BE A RCRA WASTE, THEN LAND BAN WOULD BE CONSIDERED AN ARAR AND WOULD BE COMPLIED WITH. THE ALTERNATIVE WOULD NOT EMPLOY TREATMENT TO REDUCE TOXICITY, MOBILITY, OR VOLUME, AND THE CONTAMINATION PROBLEM WOULD BE TRANSFERRED TO A LANDFILL FACILITY. THE COST FOR ALTERNATIVE S-3 IS ESTIMATED AT $241,054, WHICH COMES PRIMARILY FROM THE LANDFILL DISPOSAL FEE OF 740 CUBIC YARDS OF CONTAMINATED SOIL ESTIMATED IN THE FS. BECKMAN HAS STATED THAT THIS IS A WORST CASE ESTIMATE, AND THAT THE ACTUAL VOLUME OF CONTAMINATED SOILS MAY BE MUCH LESS. THE REMEDY IS PERCEIVED TO BE ACCEPTABLE TO THE STATE AND LOCAL COMMUNITY.

ALTERNATIVE S-4 (EXTRACTION, TREATMENT, AND OFF-SITE DISPOSAL) WOULD PROVIDE THE SAME PUBLIC HEALTH PROTECTIVENESS AND EFFECTIVENESS AS ALTERNATIVE S-3 FOR THE SITE. THE USE OF STABILIZATION AS A TREATMENT, HOWEVER, PROVIDES ADDITIONAL PROTECTION FOR THE LANDFILL RECEIVING THE STABILIZED SOIL MASS. THE STABILIZED SOIL MASS MAY BE ABLE TO BE RECLASSIFIED AS NON-HAZARDOUS ALLOWING DISPOSAL AT A NON-HAZARDOUS WASTE FACILITY. TREATMENT WOULD REDUCE CONTAMINANT MOBILITY, BUT THE VOLUME OF CONTAMINATED SOIL WOULD BE EXPECTED TO INCREASE BY 30% TO 50%. THE ALTERNATIVE IS EASILY IMPLEMENTABLE. COST IS ESTIMATED AT $291,554, WHICH IS APPROXIMATELY $50,000 MORE THAN ALTERNATIVE S-3 DUE TO TREATMENT COSTS. THE COST OF THIS REMEDY IS BASED ON ESTIMATES IN THE FS WHICH MAY OVERESTIMATE THE VOLUME OF CONTAMINATED SOIL. THE REMEDY IS PERCEIVED TO BE ACCEPTABLE TO THE STATE AND LOCAL COMMUNITY.

IX. THE SELECTED REMEDY

UPPER AQUIFER
THE SELECTED REMEDY FOR THE UPPER AQUIFER IS ALTERNATIVE G-3. THIS ALTERNATIVE CONSISTS OF CONTINUATION OF THE EXISTING BECKMAN EXTRACTION, TREATMENT, AND DISCHARGE SYSTEMS. THE SYSTEM HAS BEEN TREATING GROUNDWATER SINCE 1985 AND HAS BEEN SHOWN TO BE EFFECTIVE IN REDUCING CONTAMINATION LEVELS IN THE UPPER AQUIFER. THE ALTERNATIVE OFFERS SIGNIFICANT SHORT-TERM PUBLIC HEALTH PROTECTIVENESS, IS ESTIMATED TO TAKE LESS THAN ONE YEAR TO REDUCE CONTAMINANT LEVELS TO MCLS, AND WILL BE A PERMANENT SOLUTION FOR THE UPPER AQUIFER. THE ALTERNATIVE IS COST-EFFECTIVE BECAUSE THE TREATMENT SYSTEM IS ALREADY IN PLACE PERMITS FOR THE CURRENT DISCHARGE OF TREATED WATER AND AIR EMISSION HAVE ALREADY BEEN OBTAINED, ALTHOUGH THESE PERMITS WILL HAVE TO BE REVIEWED UPON INITIATION OF TREATMENT FOR THE LOWER AQUIFER AND AQUITARD. COMPLETION OF THE SELECTED REMEDY WILL ALLOW UNRESTRICTED ACCESS TO THE UPPER AQUIFER. THE SELECTED REMEDY COMPLIES WITH SARA'S PREFERENCE FOR TREATMENT AS THE PRINCIPAL REMEDY.

UPPER AQUITARD/LOWER AQUIFER

THE SELECTED REMEDY FOR THE UPPER AQUITARD/LOWER AQUIFER IS ALTERNATIVE LG-5, CONCURRENT AQUITARD/LOWER AQUIFER EXTRACTION, TREATMENT, AND DISCHARGE. THE ALTERNATIVE WOULD INVOLVE INSTALLATION OF EXTRACTION WELLS AND TREATMENT OF EXTRACTED WATER IN AN AIR TREATMENT UNIT. IT IS EXPECTED THAT THE EXISTING AIR TREATMENT UNITS WILL BE USED, ALTHOUGH THE EXISTING PERMITS MAY HAVE TO BE REVIEWED AND MODIFIED. THE ALTERNATIVE ADDRESSES THE SOURCE OF CONTAMINATION AND THE AFFECTED AQUIFER. IT IS RECOGNIZED THAT PUMPING IN THE AQUITARD MAY BE LIMITED, PARTICULARLY WEST OF THE BECKMAN PLANT DUE TO THE RELATIVELY IMPERMEABLE NATURE OF THE AQUITARD IN THIS AREA. THE LOCATION OF PUMPING WELLS AND EXTRACTION RATES WILL BE DETERMINED DURING REMEDIAL DESIGN. THIS ALTERNATIVE IS EXPECTED TO ACHIEVE PUBLIC HEALTH PROTECTION IN THE LEAST AMOUNT OF TIME (ABOUT 25 YEARS) AND WOULD TAKE ADVANTAGE OF CURRENT SYSTEMS THUS MAKING IT READILY IMPLEMENTABLE. WHEN COMPLETE, THE ALTERNATIVE OFFERS A PERMANENT SOLUTION FOR THE SITE. THE ALTERNATIVE IS COST EFFECTIVE WHEN COMPARED TO ALTERNATIVES THAT WILL TAKE UP TO 100 YEARS TO ACCOMPLISH. COMPLETION OF THE REMEDY WILL ALLOW UNRESTRICTED USE OF THE LOWER AQUIFER. THE SELECTED REMEDY COMPLIES WITH SARA'S PREFERENCE FOR TREATMENT.

SOILS

THE SELECTED REMEDY FOR THE LEAD-CONTAMINATED SOILS IS ALTERNATIVE S-3. THIS ALTERNATIVE INVOLVES EXCAVATION OF CONTAMINATED SOILS AND OFFSITE DISPOSAL OF THE EXCAVATED SOILS. THE ALTERNATIVE IS A PERMANENT SOLUTION FOR THE SITE, ALLOWING UNRESTRICTED ACCESS TO THE AREA OF CONTAMINATION AFTER REMEDIATION. SIGNIFICANT PUBLIC HEALTH PROTECTION WOULD BE ACHIEVED. ALTERNATIVE S-3 WAS CHOSEN AS THE REMEDY FOR SOILS BASED ON FURTHER REVIEW OF AVAILABLE DATA AND PUBLIC COMMENT. BECKMAN HAS STATED THAT THE ESTIMATE OF SOIL VOLUMES IN THE FS REPRESENT A "WORST CASE" SCENARIO AND IT IS EXPECTED THAT THE ACTUAL VOLUMES OF SOIL AND CONCENTRATIONS OF LEAD IN SOILS TO BE MUCH LESS THAN STATED IN THE FS. BASED ON THIS INFORMATION, TREATMENT IS NOT EXPECTED TO BE AS COST-EFFECTIVE. IN ADDITION, THE BENEFITS OF TREATMENT (REDUCTION IN MOBILITY) IS NOT EXPECTED TO OFFSET THE VOLUMETRIC INCREASE IN CONTAMINATED MATERIAL, PARTICULARLY SINCE THE CONCENTRATIONS OF LEAD ARE EXPECTED TO BE RELATIVELY LOW (LESS THAN OR EQUAL TO 1280 PPM). ALTHOUGH THE
PREFERENCE FOR TREATMENT AS A PRINCIPAL COMPONENT OF THE REMEDY WOULD NOT BE SATISFIED, THESE FACTORS HAVE LED EPA TO CHOOSE ALTERNATIVE S-3 AS THE SELECTED REMEDY. THIS ALTERNATIVE IS COST-EFFECTIVE. IN THE EVENT THAT ADDITIONAL INFORMATION COLLECTED DURING SAMPLING IN THE REMEDIAL DESIGN SUGGESTS THAT THE ORIGINAL VOLUME ESTIMATES ARE CORRECT AND/OR CONCENTRATIONS OF CONTAMINANTS ARE MUCH GREATER THAN ORIGINALLY EXPECTED, THIS DECISION WILL BE REEVALUATED, AS TREATMENT MAY BE THE MOST APPROPRIATE REMEDY IN THAT CASE.

CLEANUP GOALS

EPA HAS SELECTED FEDERAL MAXIMUM CONTAMINANT LIMITS (MCLS) AS THE CLEANUP GOALS FOR THE GROUNDWATER IN THE UPPER AND LOWER AQUIFER. WHERE STATE MCLS ARE MORE STRINGENT, EPA HAS SELECTED STATE MCLS, AS IN THE CASE OF 1,1-DCE. FOR THOSE CHEMICALS WHICH DO NOT HAVE STATE OR FEDERAL MCLS ESTABLISHED, AS IN THE CASE OF FREON 113 AND 1,1-DCA, EPA HAS SELECTED STATE ACTION LEVELS AS THE CLEANUP GOALS. THE SELECTION OF MCLS AS CLEANUP GOALS IS CONSISTENT WITH THE NATIONAL CONTINGENCY PLAN AND EPA POLICY. THE CLEANUP GOALS ARE PRESENTED IN TABLE 4.

THE AQUIFARD UNDERLYING THE BECKMAN SITE IS RECOGNIZED TO BE A VARIABLE UNIT RANGING FROM RELATIVELY IMPERMEABLE CLAYS TO THE WEST OF THE PLANT AND GRADING TO MUCH COARSER AND RELATIVELY MORE PERMEABLE SILTS, SANDS AND CLAYS IN THE VICINITY OF THE BECKMAN PLANT. THE AQUIFARD IS RECOGNIZED TO BE A SOURCE OF CONTAMINANTS IN THE STUDY AREA. IN THE VICINITY OF THE BECKMAN PLANT, THE AQUIFARD MAY ALSO BE CAPABLE OF SUPPLYING WATER TO WELLS AND THUS MAY BE AVAILABLE FOR HUMAN CONSUMPTION AND IRRIGATION. THEREFORE, THE OBJECTIVE IS TO REMEDY THE AQUIFARD TO PREVENT MIGRATION INTO THE LOWER AQUIFER AND TO PREVENT CONSUMPTION OF CONTAMINATED AQUIFARD WATERS WHICH MAY PRESENT AN ENDANGERMENT TO PUBLIC HEALTH AND THE ENVIRONMENT. THE REMEDY SPECIFIED IN THIS RECORD OF DECISION IS PUMPING AND TREATING OF ALL THREE UNITS, TO THE EXTENT PRACTICABLE. THE CLEANUP GOALS SPECIFIED ARE MCLS FOR ALL CONTAMINANTS IDENTIFIED AS COMPOUNDS OF CONCERN. IT IS RECOGNIZED THAT CLEANUP GOALS MAY NOT BE ABLE TO BE ACHIEVED IN THE MORE IMPERMEABLE ZONES OF THE AQUIFARD AND THAT SOME COMBINATION OF INSTITUTIONAL CONTROLS MAY NEED TO BE IMPLEMENTED IN THE FUTURE. THIS DECISION WILL BE REVIEWED AFTER THE REMEDY HAS BEEN IN PLACE FIVE YEARS TO DETERMINE THE FEASIBILITY OF CLEANING UP THE AQUIFARD TO MCLS.

FOR LEAD-CONTAMINATED SOILS, EPA HAS SELECTED A CLEANUP LEVEL OF 200 PPM TO PROTECT PUBLIC HEALTH AND THE ENVIRONMENT.

X. STATUTORY DETERMINATIONS

THE SELECTED REMEDY WILL COMPLY WITH ALL ARARS AND, TO THE EXTENT PRACTICABLE, THE REQUIREMENTS OF SECTION 121 OF CERCLA. THE REMEDY WILL BE PROTECTIVE OF PUBLIC HEALTH AND THE ENVIRONMENT THROUGH REMOVAL AND CONTAINMENT OF A SIGNIFICANT QUANTITY OF CONTAMINATED MEDIA. IMPLEMENTATION OF THE REMEDY WILL NOT POSE UNACCEPTABLE SHORT-TERM RISKS.

THE SELECTED REMEDY WILL MEET ALL ARARS FOR VOC RELEASE, DUST EMISSIONS, AND LAND DISPOSAL. THE SELECTED REMEDY IS COST EFFECTIVE AND MAKES MAXIMUM USE OF EXISTING TREATMENT SYSTEMS. THE REMEDY OFFERS THE
GREATEST SITE AREA HEALTH PROTECTION AT MODERATE COST. RISK REDUCTION THROUGH THE OTHER ALTERNATIVES WAS EITHER SIGNIFICANTLY LESS THAN THE SELECTED REMEDIES, OR WAS ACHIEVED AT SIGNIFICANTLY HIGHER COST.

THE SELECTED REMEDY WILL RESULT IN PERMANENT SOLUTIONS FOR THE SITE, ALLOWING SITE GROUNDWATER TO BE RETURNED TO PRODUCTIVE USE. CONTAMINATED SOIL WILL BE EXCAVATED AND REMOVED TO AN OFFSITE FACILITY WHERE LONG-TERM MANAGEMENT CAN BE PROPERLY ACHIEVED.

THE SELECTED REMEDIES FOR GROUNDWATER MEET STATUTORY PREFERENCES FOR TREATMENT AS THE PRINCIPAL REMEDY. AIR STRIPPING WILL REMOVE VOCs FROM GROUNDWATER ALLOWING PRODUCTIVE USE OF THE TREATED WATER AND WILL ACHIEVE A REDUCTION OF TOXICITY, MOBILITY, OR VOLUME OF CONTAMINANTS IN THE GROUNDWATER.

FOR ANY SOILS TAKEN OFF-SITE, LONG-TERM MAINTENANCE OF THE DISPOSAL FACILITY WILL BE A REQUIREMENT FOR THE CONTAMINATED SOILS. TREATMENT WILL PROBABLY NOT BE REQUIRED FOR LEAD-CONTAMINATED SOILS, AS THE SMALL VOLUME AND RELATIVELY LOW LEVELS OF CONTAMINATION DO NOT MAKE TREATMENT A COST-EFFECTIVE COMPONENT OF THIS REMEDY.

XI. DOCUMENTATION OF SIGNIFICANT CHANGES

THE PROPOSED PLAN FOR THE BECKMAN INSTRUMENTS SITE WAS RELEASED IN JUNE 1989. THE PROPOSED PLAN IDENTIFIED PUMPING, TREATMENT, AND DISPOSAL OF TREATED WATER TO INFILTRATION BASINS AS THE SELECTED REMEDIES FOR THE UPPER AQUIFER AND THE UPPER AQUIFAR/LOWER AQUIFER. THE PROPOSED PLAN ALSO IDENTIFIED SOIL EXCAVATION, STABILIZATION, AND OFF-SITE DISPOSAL FOR LEAD CONTAMINATED SOILS. EPA HAS REVIEWED ALL COMMENTS SUBMITTED VERBALLY AND IN WRITING DURING THE PUBLIC COMMENT PERIOD AND HAS DECIDED TO CHANGE A PORTION OF THE REMEDY AS DESCRIBED IN THE PROPOSED PLAN. EPA HAS DECIDED THAT SELECTION OF REMEDIAL ALTERNATIVE S-3 (EXCAVATION AND OFF-SITE DISPOSAL) WOULD BE THE MOST APPROPRIATE ALTERNATIVE FOR REMEDIATION OF CONTAMINATED SOILS. THE REASON FOR THIS DECISION IS THAT IT APPEARS THAT THE VOLUME OF CONTAMINATED SOIL ESTIMATED IN THE FS IS SIGNIFICANTLY HIGH. THIS IS DUE TO THE FACT THAT THE FS BASED THE CLEANUP LEVEL ON 40 PPM LEAD AND THIS RECORD OF DECISION IS SELECTING 200 PPM AS THE CLEANUP GOAL. IN FACT, A MUCH SMALLER VOLUME OF SOIL MAY BE CONTAMINATED ABOVE 200 PPM. ONLY ONE SOIL SAMPLE (AT 1280 PPM LEAD) SHOWED CONTAMINATION ABOVE THIS CLEANUP LEVEL. LEAD CONTAMINATION IN SOILS ABOVE 1000 PPM IS CONSIDERED TO BE HAZARDOUS WASTE IN THE STATE OF CALIFORNIA, BELOW THIS LEVEL IT IS A "DESIGNATED" WASTE. BY TREATING THE SOILS WITH A SILICATE BASED CEMENT ADDITIVE, THE VOLUME OF SOILS WOULD INCREASE BY 30 TO 50 PERCENT. DUE TO THE RELATIVELY LOW CONCENTRATIONS EXPECTED TO BE FOUND, IT WAS DETERMINED THAT THE STABILIZATION (REDUCTION IN MOBILITY) WAS NOT SUFFICIENT TO WARRANT THIS VOLUMETRIC INCREASE. LIMITED ADDITIONAL SAMPLING WILL BE REQUIRED TO CONFIRM THE EXTENT

OF CONTAMINATED AREAS. IN THE EVENT THAT CONCENTRATIONS OF LEAD SIGNIFICANTLY HIGHER THAN 1000 PPM AND/OR VOLUMES OF CONTAMINATED SOIL AS
DESCRIBED IN THE FS ARE DISCOVERED, AND TREATMENT MAY BE INCLUDED THE MOST APPROPRIATE ALTERNATIVE IN THAT CASE.

EPA HAS ALSO REVIEWED THE GROUNDWATER CLEANUP GOALS IDENTIFIED IN THE PROPOSED PLAN FOR ACHIEVEMENT OF THE REMEDIAL ACTION. IN THE PROPOSED PLAN EPA IDENTIFIED 0.5 UG/L AS THE CLEANUP GOAL FOR ANY OF THE VOCs DETECTED IN THE LOWER OR UPPER AQUIFERS. HOWEVER, AFTER CONSIDERATION OF THE PUBLIC COMMENTS RECEIVED, AND AFTER REVIEW OF THE PROTECTIVENESS AFFORDED BY A 0.5 UG/L LEVEL AND THE PROTECTIVENESS AFFORDED BY MCLS FOR EACH INDIVIDUAL VOC, EPA HAS ELECTED TO CHANGE THE CLEANUP GOALS FOR EACH VOC TO ITS RESPECTIVE STATE AND/OR FEDERAL MCL. CLEANUP GOALS FOR EACH OF THE VOCs ARE SHOWN ON TABLE 4. EPA HAS DETERMINED THAT CLEAN UP OF BOTH AQUIFERS TO MCLS WILL PROVIDE ADEQUATE PROTECTION TO PUBLIC HEALTH AND THE ENVIRONMENT AND THEREFORE IS MAKING THIS CHANGE IN THIS DECISION DOCUMENT.

TABLES AND ATTACHMENTS

**TABLE 1**
MAXIMUM CONTAMINANT CONCENTRATIONS IN GROUNDWATER
(MICROGRAMS PER LITTER)

<table>
<thead>
<tr>
<th>SITE CONTAMINANT</th>
<th>SEPTEMBER 1988</th>
<th>MARCH/MAY 1989</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>UPPER AQUIFER</td>
<td>LOWER AQUIFER</td>
</tr>
<tr>
<td>1,1,1-TCA</td>
<td>18.0</td>
<td>2.7</td>
</tr>
<tr>
<td>1,1-DCE</td>
<td>11.0</td>
<td>17.0</td>
</tr>
<tr>
<td>FREON 113</td>
<td>16.0</td>
<td>16.0</td>
</tr>
<tr>
<td>1,1-DCA</td>
<td>2.1</td>
<td>6.1</td>
</tr>
<tr>
<td>TCE</td>
<td>0.5</td>
<td>26.0</td>
</tr>
<tr>
<td>ND = NOT DETECTED</td>
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**TABLE 2**
CONSTITUENTS DETECTED ABOVE BACKGROUND LEVELS IN SITE SOIL
(MILLIGRAMS PER KILOGRAM)

<table>
<thead>
<tr>
<th>INORGANICS</th>
<th>MAXIMUM CONCENTRATION</th>
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<tbody>
<tr>
<td>ARSENIC</td>
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<tr>
<td>CADMIUM</td>
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</tr>
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<td>TOTAL CHROMIUM</td>
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<tr>
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</tr>
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<td>MOLYBDENUM</td>
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<tr>
<td>SILVER</td>
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<td>SODIUM</td>
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</tr>
<tr>
<td>TIN</td>
<td>478.0</td>
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<td>ZINC</td>
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</table>
ORGANICS                          MAXIMUM CONCENTRATION
AROCLOR-1254                      1.7
BENZO (B)                          0.24
FLUORANTHENE                      
DDT                               0.36
DDE                               0.55
DDD                               0.37
PYRENE                            0.20
4-METHYL-2-PENTANONE              0.07
TOLUENE                           0.013
TOTAL XYLENES                     0.025

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<tr>
<th>SITE</th>
<th>CAS NO.</th>
<th>ORAL CPF</th>
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<tbody>
<tr>
<td>1,1,1-TCE</td>
<td>71-55-6</td>
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<td>75-35-4</td>
<td>0.6</td>
<td>C</td>
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<tr>
<td>TCE</td>
<td>79-01-6</td>
<td>0.011</td>
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<td>75-34-3</td>
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(1) ALL DATA FROM THE ENDANGERMENT ASSESSMENT FOR THE BECKMAN INSTRUMENTS SITE.

CPF = CANCER POTENCY FACTOR, EXPRESSED AS (MG/KG/DAY)(-1)
WOE = WEIGHT OF EVIDENCE
AIC = ACCEPTABLE CHRONIC INTAKE

<table>
<thead>
<tr>
<th>SITE</th>
<th>INHALATION CPF</th>
<th>WOE</th>
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CPF = CANCER POTENCY FACTOR, EXPRESSED AS (MG/KG/DAY)(-1)
WOE = WEIGHT OF EVIDENCE
AIC = ACCEPTABLE CHRONIC INTAKE

TABLE 4
CLEAN UP GOALS AND WATER QUALITY CRITERIA
(MICROGRAMS PER LITER)
<table>
<thead>
<tr>
<th>SITE</th>
<th>CLEAN UP GOALS CONTAMINANT LEVEL</th>
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<th>STATE MAXIMUM CONTAMINANT LEVEL</th>
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(*) PROPOSED CALIFORNIA STATE MCL.

BECKMAN INSTRUMENTS
PORTERVILLE, CALIFORNIA
RESPONSE SUMMARY

A. OVERVIEW


MOST COMMENTORS SAID THAT THEY BELIEVED THE CLEAN-UP GOALS, SET MORE STRINGENT THAN DRINKING WATER STANDARDS, WERE UNREALISTIC, UNNECESSARY AND UNFAIR TO BECKMAN. MANY COMMENTORS QUESTIONED THE BENEFITS TO BE GAINED BY ACHIEVING MORE STRINGENT CLEAN-UP GOALS. THESE COMMENTORS ALSO EMPHASIZED THE ECONOMIC HARDSHIPS THE PORTERVILLE COMMUNITY COULD ENDURE AS IT RETAINED THE "CONTAMINATED" STIGMA THROUGHOUT THE 15-25 YEARS NEEDED TO ACHIEVE THESE CLEAN-UP GOALS. THE IMPACTS CITED MOST OFTEN INCLUDED THE PERCEPTION BY CONSUMERS THAT PRODUCE AND ANIMAL
PRODUCTS FROM THE AREA MIGHT BE UNSAFE TO CONSUME AND THE DISINCENTIVE CREATED TO INDUSTRIES CONSIDERING MOVING TO THE PORTERVILLE AREA.

MOST COMMENTORS CITED FAIRNESS AS A KEY ISSUE TO BE CONSIDERED BY EPA IN DEALING WITH BECKMAN WHOM THEY PERCEIVE TO BE AN ACTIVE, RESPONSIBLE CORPORATE CITIZEN. SEVERAL COMMENTORS ALSO QUESTIONED EPA'S CREDIBILITY IN LIGHT OF SOME CONTROVERSIAL ASPECTS OF EPA'S ENDANGERMENT ASSESSMENT.

THE COMMENTS RECEIVED BY EPA DURING THE PUBLIC COMMENT PERIOD HAVE BEEN ADDRESSED IN THIS SUMMARY. THIS SUMMARY CONTAINS THE FOLLOWING SECTIONS:

* BACKGROUND ON COMMUNITY INVOLVEMENT
* SUMMARY OF COMMENTS RECEIVED DURING THE PUBLIC COMMENT PERIOD AND EPA'S RESPONSES
* REMAINING CONCERNS
* ATTACHMENT: COMMUNITY RELATIONS ACTIVITIES AT BECKMAN INSTRUMENTS

B. BACKGROUND ON COMMUNITY INVOLVEMENT


MAJOR CONCERNS EXPRESSED BY COMMUNITY MEMBERS OVER THE PAST SIX (6) YEARS HAVE INCLUDED CONCERNS REGARDING:

* POTENTIAL SPREAD OF CONTAMINATION - THE THREAT OF FUTURE CONTAMINATION OF PRIVATE AND CITY WATER WELLS; HAD THE SOURCE OF CONTAMINATION REALLY BEEN STOPPED?
* HEALTH EFFECTS RELATED TO CONTAMINATION OF PRIVATE WELLS ESPECIALLY THE DANGERS TO SENSITIVE POPULATIONS SUCH AS YOUNG CHILDREN AND OLDER RESIDENTS; RISKS ASSOCIATED WITH CONSUMING PRODUCE OR ANIMAL PRODUCTS THAT INGEST THE CONTAMINATED GROUNDWATER.

* IMPACT ON PORTERVILLE ECONOMY - THE NEGATIVE IMAGE AND FEAR CREATED BY THE "CONTAMINATED" STIGMA AND IT'S IMPACT ON THE CITY'S ABILITY TO ATTRACT NEW INDUSTRIES AND PROMOTE ITS AGRICULTURAL PRODUCTS.

*POSITIVE ATTITUDE TOWARD BECKMAN - WIDESPREAD COMMUNITY BELIEF THAT BECKMAN WAS A GOOD CORPORATE CITIZEN AND HAD DONE AN EXCELLENT JOB OF ADDRESSING ITS GROUNDWATER CONTAMINATION PROBLEMS; CONCERN THAT IF CLEANUP METHODS BECAME TOO COSTLY, BECKMAN MIGHT CLOSE ITS PORTERVILLE PLANT WHICH WOULD BE A TREMENDOUS LOSS TO THE CITY.

EPA HAS SOUGHT TO ADDRESS THESE AND OTHER PORTERVILLE COMMUNITY CONCERNS BY DOING THE FOLLOWING:

PRESENTING INFORMATION TO COMMUNITY MEMBERS REGARDING THE STATUS OF BECKMAN SUPERFUND ACTIVITIES - EPA PREPARED A COMMUNITY RELATIONS PLAN WHICH DESCRIBED ALL PLANNED COMMUNITY OUT-REACH ACTIVITIES. EPA ATTEMPTED TO KEEP THE COMMUNITY INFORMED BY PREPARING AND DISTRIBUTING TWO (2) FACTSHEETS AND ONE (1) FACT SHEET UPDATE. EPA ALSO ESTABLISHED A LOCAL REPOSITORY AT THE PORTERVILLE CITY LIBRARY FOR SITE-RELATED MATERIALS FOR PUBLIC REVIEW.

PROVIDED OPPORTUNITIES FOR TWO WAY COMMUNICATION BETWEEN EPA AND THE COMMUNITY - EPA DISTRIBUTED FACT SHEETS WHICH ENCOURAGED COMMUNITY MEMBERS TO ASK QUESTIONS AND MAKE COMMENTS BY CALLING EPA'S TOLL-FREE TELEPHONE NUMBER. EPA CONDUCTED MEETINGS IN EARLY JUNE, 1989 WITH CIVIC LEADERS AND A PUBLIC MEETING ON JUNE 22, 1989 TO ANSWER QUESTIONS AND RECEIVE THE COMMUNITY COMMENTS REGARDING EPA'S PROPOSED PLAN FOR ADDRESSING THE REMAINING SITE CONTAMINATION.

C. SUMMARY OF COMMENTS RECEIVED DURING PUBLIC COMMENT PERIOD

THE PUBLIC COMMENT PERIOD FOR THE BECKMAN INSTRUMENTS SITE WAS HELD FROM JUNE 12, 1989 THROUGH JULY 18, 1989. THE PUBLIC COMMENT PERIOD WAS ORIGINALLY SCHEDULED TO CLOSE ON JULY 11, 1989 BUT WAS EXTENDED ONE WEEK BY EPA IN RESPONSE TO REQUESTS RECEIVED FROM BECKMAN AND OTHERS. DURING THE PUBLIC COMMENT PERIOD, EPA RECEIVED A TOTAL OF FORTY (40) COMMENTS REGARDING THE DRAFT FEASIBILITY STUDY (FS) AND EPA'S PROPOSED PLAN FOR CLEANING UP THE REMAINING SITE CONTAMINATION. EPA RECEIVED NINE (9) VERBAL COMMENTS AT THE PUBLIC MEETING HELD IN THE PORTERVILLE CITY HALL ON JUNE 22, 1989, AND THIRTY-ONE (31) WRITTEN COMMENTS THEREAFTER. TWO (2) COMMENTS WERE RECEIVED AFTER THE CLOSE OF THE FORMAL PUBLIC COMMENT PERIOD AND ARE INCLUDED IN THIS RESPONSE SUMMARY AS WELL. FIVE (5) COMMENTORS SUBMITTED BOTH VERBAL AND WRITTEN COMMENTS RAISED DURING THE PUBLIC COMMENT PERIOD ARE SUMMARIZED BELOW AND ARE CATEGORIZED BY RELEVANT TOPICS.
REMEDIAL ALTERNATIVE PREFERENCES

RELATIVELY FEW OF THE COMMENTS RECEIVED DURING THE PUBLIC COMMENT PERIOD DEALT WITH THE CHOICE OF SPECIFIC REMEDIAL ALTERNATIVES OF THE COMMENTS THAT WERE RECEIVED IN THIS CATEGORY, MOST ADDRESSED CONCERNS REGARDING EPA'S PREFERRED ALTERNATIVES FOR ADDRESSING CONTAMINATION OF THE SOILS AND THE AQUIFER/LOWER AQUIFER.

UPPER AQUIFER

1. CALIFORNIA DEPARTMENT OF HEALTH SERVICES, TOXIC SUBSTANCE CONTROL, DIVISION (DHS) EXPRESSED GENERAL CONCURRENCE WITH EPA'S PROPOSED APPROACH FOR ADDRESSING SITE CONTAMINATION AND STATED THAT THEY CONSIDER THE PROPOSED ACTIONS TO BE PROTECTIVE OF HUMAN HEALTH AND THE ENVIRONMENT. DHS ALSO HAD OTHER SPECIFIC COMMENTS WHICH WILL BE ADDRESSED LATER IN THE SUMMARY. THE REGIONAL WATER QUALITY CONTROL BOARD (RWQCB OR BOARD) ALSO EXPRESSED CONCURRENCE ON SELECTION OF ALTERNATIVE G-3(A).

2. BECKMAN INSTRUMENTS (BECKMAN) AND THE TULARE COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH (DEH) CONCURRED WITH EPA'S PROPOSAL TO CONTINUE USING THE EXISTING PUMP, TREAT AND DISCHARGE TECHNOLOGY (INCLUDING AIR STRIPPING) TO ADDRESS THE REMAINING CONTAMINATION IN THE UPPER AQUIFER. BECKMAN AND DEH COMMENTED THAT THIS TECHNOLOGY HAS PROVEN ITSELF TO BE A TECHNICALLY SOUND AND EFFECTIVE TREATMENT METHOD. DEH ALSO EMPHASIZED THAT THE NECESSARY COMPONENTS ARE IN PLACE AND THAT THE COMMUNITY IS FAMILIAR WITH THIS TREATMENT METHOD AND HAS CONFIDENCE IN IT.

3. TWO (2) RESIDENTS COMMENTED THAT THEY FULLY AGREE WITH EPA'S PROPOSED PLAN FOR BECKMAN. THEY STATED THAT THEY WERE VERY CONCERNED REGARDING THE SPREAD OF CONTAMINATION IN THE LOWER AQUIFER TOWARD THEM. THEY SAID IT WAS UNFORTUNATE THAT MORE PEOPLE WHO LIVE IN THE UNINCORPORATED AREA AROUND THE PROJECT WERE EITHER UNAWARE OR UNWILLING TO ATTEND THE PUBLIC MEETING.

EPA RESPONSE: EPA AGREES WITH AND ACKNOWLEDGES THE COMMENT.

4. BECKMAN STATED THAT EPA'S PROPOSED PLAN LACKS A DESCRIPTION OF THE SPECIFIC CRITERIA TO BE USED TO DETERMINE WHEN THE REMEDIAL ACTION HAS BEEN COMPLETED. BECKMAN PROPOSED A CRITERION THAT WOULD CALL FOR THEM TO CONTINUE OPERATING THE PUMP AND TREAT SYSTEM FOR SIX (6) MONTHS AFTER THE CONCENTRATION OF 1,1 DICHLOROETHYLENE (DCE) IN THE UPPER AQUIFER DROPS TO OR BELOW THE SELECTED CLEAN-UP GOALS DURING THAT MONITORING OF SELECTED WELLS WOULD THEN CONTINUE FOR A ONE-YEAR PERIOD THEREAFTER. IF DCE CONCENTRATIONS REMAIN AT OR BELOW SELECTED CLEAN-UP GOALS DURING THAT MONITORING YEAR, THEN REMEDIATION WOULD BE CONSIDERED COMPLETE.

EPA RESPONSE: THE PURPOSE OF THE PROPOSED PLAN IS TO PROVIDE A SHORT SUMMARY OF THE REMEDIAL ALTERNATIVES EVALUATED IN THE FEASIBILITY STUDY FOR A PARTICULAR SITE AND TO PRESENT EPA'S PREFERRED ALTERNATIVE FOR SITE REMEDIATION. THE DETAILED CRITERIA WILL BE DETERMINED BY EPA FOLLOWING DISCUSSIONS WITH BECKMAN.
SOIL

1. BECKMAN DISAGREED WITH EPA'S PROPOSAL TO ADDRESS LEAD-CONTAMINATED SOIL AT THE SITE. BECKMAN SAID THAT EXCAVATION AND TREATMENT OF THIS SOIL WAS UNNECESSARY. BECKMAN CITED THE RELATIVELY SMALL VOLUME OF SOIL AFFECTED AND THAT EPA'S PLANS ARE BASED ON THE RESULT OF ONE (1) SOIL SAMPLE OUT OF ABOUT 200 SAMPLES TAKEN. BECKMAN CITED THE FACT THAT THIS ONE SAMPLE WAS TAKEN AT A DEPTH OF 1 1/2 FEET BELOW THE SURFACE IN AN AREA ALREADY DESIGNATED BY THE CITY OF PORTERVILLE AS A FUTURE ROAD SITE. BECKMAN SAID THAT ALL OF THESE FACTORS CONTRIBUTE TO POsing A LOW RISK OF HUMAN EXPOSURE AND THEREFORE DON'T WARRANT EPA'S PROPOSED EXCAVATION, TREATMENT AND DISPOSAL PLANS.

EPA RESPONSE: EPA'S PROPOSED PLAN WAS BASED ON THE RESULTS OF THE FEASIBILITY STUDY PREPARED BY BECKMAN. THE FS ESTIMATED THAT APPEARATELY 740 CUBIC YARDS OF SOIL WERE CONTAMINATED ABOVE 40 PPM, THE LEVEL ASSUMED IN THE FS TO BE THE CLEAN-UP SOIL. EPA HAS ACKNOWLEDGED THAT THE VOLUME OF SOIL CONTAMINATED ABOVE 200 PPM (THE CLEANUP GOAL SET IN THIS ROD) MAY BE MUCH LESS THAN ESTIMATED IN THE FS. EPA HAS THEREFORE SELECTED, CONDITIONAL UPON INFORMATION DETERMINED DURING REMEDIAL DESIGN, REMEDIAL ALTERNATIVE S-3, EXCAVATION AND OFF-SITE DISPOSAL FOR REMEDIATION OF SOIL CONTAMINATED WITH LEAD IN EXCESS OF 200 PPM.

2. TULARE COUNTY DEH COMMENTED THAT THEY CONCUR WITH EPA'S PROPOSAL TO EXCAVATE AND DISPOSE OF BECKMAN'S LEAD-CONTAMINATED SOIL. DEH SAID, HOWEVER, THAT IT DIDN'T FIND SUFFICIENT JUSTIFICATION TO REQUIRE SOIL TREATMENT PRIOR TO DISPOSAL. DEH BELIEVES THE HEALTH THREATPOSED BY THESE SOILS TO BE MINIMAL. DEH SAID THEY WERE UNCERTAIN WHETHER THE SOLIDIFIED MATERIAL COULD BE DETERMINED TO BE NON-HAZARDOUS AND, THEREFORE, BE DISPOSED OF IN A TULARE COUNTY LANDFILL. DEH STATED THAT THE TREATED MATERIAL WOULD REMAIN A "DESIGNATED WASTE" AND DEH HAS NOT DETERMINED HOW TO TREAT THESE CLASSES OF WASTES.

EPA RESPONSE: EPA ACKNOWLEDGES THE COMMENT AND HAS SELECTED REMEDIAL ALTERNATIVE S-3, EXCAVATION AND OFFSITES DISPOSAL AS THE REMEDIAL ACTION.

3. THE RWQCB STATED THAT THE CONSTITUENTS DETECTED ABOVE BACKGROUND LEVELS DO NOT POSE A THREAT TO WATER QUALITY AND THAT ALTERNATIVE S-4, EXCAVATION, TREATMENT, AND OFFSITE DISPOSAL IS AN ACCEPTABLE ALTERNATIVE.

EPA RESPONSE: EPA ACKNOWLEDGES THE COMMENT.

AQUIFAR/LOWER AQUIFER

1. BECKMAN, TULARE COUNTY DEH AND CONGRESSMAN PASHAYAN COMMENTED THAT THEY BELIEVE INSUFFICIENT DATA EXISTS TO SELECT A REMEDY OR CLEAN-UP GOAL FOR THE AQUIFAR/LOWER AQUIFER. DEH SAID "THE DATA APPEARS SCANT TO WARRANT COMMITTING TO A SIGNIFICANT COURSE OF ACTION". DEH BELIEVES THE MISSING DATA COULD BE OBTAINED RELATIVELY QUICKLY AND COULD PROVIDE A CLEARER UNDERSTANDING OF THE EXTENT OF CONTAMINATION IN THESE ZONES. CONGRESSMEN PASHAYAN ADDED THAT WHILE CONGRESS IS CONCERNED ABOUT EXPEDITIOUS COMPLETION OF SUPERFUND CLEAN-UPS, THEIR PRIMARY CONCERN IS THE OVERALL QUALITY OF THE WORK AND ASSURING APPROPRIATE AND COST-EFFECTIVE REMEDIES.
BECKMAN STATED THAT THE MISSING INFORMATION IS CRITICAL TO ADEQUATELY PRESCRIBE CLEAN-UP METHODS AND GOALS. BECKMAN SAID THAT IMPLEMENTATION OF EPA'S PROPOSED REMEDY WITHOUT SUFFICIENT DATA COULD ULTIMATELY PREVENT REMOVAL OF AQUIFER CONTAMINANTS OR VASTLY INCREASE THE TIME NECESSARY TO REMOVE THEM. BECKMAN CITED IMPORTANT MISSING DATA WHICH INCLUDED BETTER DEFINITION OF THE AREAL EXTENT OF AQUIFER CONTAMINANTS, THE HYDRAULIC RELATIONSHIPS BETWEEN THE TWO AQUIFERS AND THE AQUIFARD, AN EVALUATION OF POTENTIAL UPGRADE SOURCES OF AND THE EXTENT TO WHICH AQUIFER CONTAMINANTS CAN BE STORED, TRANSMITTED OR RELEASED IN RESPONSE TO PUMPING IN THESE AQUIFERS AND THE AQUIFARD. BECKMAN STATED THAT, FOLLOWING FURTHER STUDY, EPA'S MAXIMUM CONTAMINANT LEVELS (MCLS) WOULD PRESUMABLY BE THE APPROPRIATE CLEAN-UP GOAL FOR THE LOWER AQUIFER BUT THIS DETERMINATION COULD ONLY BE MADE AT THE COMPLETION OF FURTHER WORK.

EPA RESPONSE: EPA RECOGNIZES THAT ADDITIONAL WORK WILL BE REQUIRED TO DEVELOP DETAILED DESIGN PARAMETERS REGARDING THE REMEDIAL ACTION FOR THE AQUIFARD AND LOWER AQUIFER. EPA DISAGREES THAT IMPLEMENTATION OF EPA'S PROPOSED REMEDY MAY PRECLUDE EFFECTIVE IMPLEMENTATION OF A GENERAL REMEDIAL ACTION FOR THESE UNITS. OF THE TECHNOLOGIES EVALUATED IN THE FS PUMPING AND TREATING GROUND WATER (PUMP AND TREAT), NO ACTION AND INSTITUTIONAL CONTROLS WERE THE THREE TECHNOLOGIES BELIEVED TO BE FEASIBLE AT THIS TIME. NEITHER THE NO ACTION NOR THE INSTITUTIONAL CONTROL ALTERNATIVES ARE ACCEPTABLE TO EPA, THE STATE WATER QUALITY CONTROL BOARD AND THE STATE DEPARTMENT OF HEALTH SERVICES. THESE ALTERNATIVES REQUIRE CONTROLLING RISKS TO PUBLIC HEALTH AND THE ENVIRONMENT FOR SEVERAL HUNDRED YEARS AND THEY DO NOT COMPLY WITH APPLICABLE OR RELEVANT REQUIREMENTS (ARARS). THEN THE ONLY FEASIBLE TECHNOLOGY AT THIS TIME APPEARS TO BE PUMP AND TREAT. EPA ACKNOWLEDGES THAT THE EFFECTIVENESS OF THE REMEDIAL ACTION IN REMOVING CONTAMINANTS TO CLEANUP GOALS IS NOT FULLY KNOWN. THE EFFECTIVENESS OF ANY PUMP AND TREAT SYSTEM (EXCEPT HYDROLOGICALLY IDEAL SYSTEMS) CAN ONLY BE DETERMINED AFTER THE OPERATION OF SUCH A SYSTEM.

2. THE RWQCfB HAS STATED THAT ALTERNATIVE LG-5 IS AN ACCEPTABLE APPROACH. HOWEVER, THE RWQCfB HAS RECOMMENDED THAT CLEANUP GOALS BE ESTABLISHED FOR THE AQUIFARD AS WELL BECAUSE THE BOARD STAFF "BELIEVE THAT THE AQUIFARD IS A POTENTIAL SOURCE OF WATER" AND THAT "WATERS IN THE AQUIFARD ARE WATERS OF THE STATE."

EPA RESPONSE: EPA AGREES WITH THE BOARD'S CONCLUSIONS REGARDING ESTABLISHING CLEAN UP GOALS FOR THE AQUIFARD. EPA WILL BE DISCUSSING THIS ISSUE WITH BOARD STAFF.

TECHNICAL QUESTIONS/CONCERNS REGARDING REMEDIAL ALTERNATIVES

MOST OF THE COMMENTS RECEIVED DURING THE PUBLIC COMMENT PERIOD ADDRESSED CONCERNS IN THIS CATEGORY, SPECIFICALLY EPA'S PROPOSED CLEAN-UP GOALS FOR GROUNDWATER AND EPA'S ENDANGERMENT ASSESSMENT (EA).

1. MANY COMMENTORS EXPRESSED THE BELIEF THAT EPA'S PROPOSED CLEAN-UP GOAL OF .5 PBP FOR ALL OF THE GROUNDWATER CONTAMINANTS AT THE SITE IS UNREALISTIC, INAPPROPRIATE AND UNNECESSARY TO PROTECT PUBLIC HEALTH. THEY STATED THAT THE APPROPRIATE CLEAN-UP GOALS SHOULD BE MCLS. THIS COMMENT WAS EXPRESSED IS ONE FORM OR ANOTHER BY MOST OF THE
COMMENTORS INCLUDING BECKMAN, PORTERVILLE'S MAYOR AND CHAMBER OF COMMERCE, CALIFORNIA STATE ASSEMBLYMAN BILL JONES, CALIFORNIA STATE SENATOR ROSE ANN VIUCH, TULARE COUNTY SUPERVISOR GARY REED, PORTERVILLE CIVIC DEVELOPMENT FOUNDATION, TAKARE, REES INC., BANK OF THE SIERRA, CONGRESSMAN CHARLES PASHAVAN JR., AND EIGHTEEN (18) LOCAL RESIDENTS. MAYOR ENSSLIN SAID THAT THE .5 PPB CLEAN-UP GOAL REQUIREMENT WAS UNREALISTIC AND COULD TAKE 15-25 YEARS TO ACCOMPLISH. BECKMAN, AS WELL AS ASSEMBLYMAN JONES AND SENATOR VIUCH, SAID THAT MCLS ARE FULLY PROTECTIVE OF HUMAN HEALTH AND THE ENVIRONMENT AS STATED IN EPA'S OWN GUIDANCE DOCUMENTS. SENATOR VIUCH ALSO SAID THAT MCLS INCORPORATE AN ADEQUATE MARGIN OF HEALTH SAFETY.

**EPA RESPONSE:** EPA HAS CONSIDERED THESE COMMENTS AND IS SELECTING MCLS AS THE CLEAN-UP GOALS FOR THIS SITE.

2. BECKMAN COMMENTED THAT MCLS ARE THE APPROPRIATE CLEAN-UP GOALS AT THIS SITE ESPECIALLY CONSIDERING THE FACT THAT EPA'S MAXIMUM CONTAMINANT LEVEL GOAL (MCLG) FOR THE BECKMAN INDICATOR CHEMICAL (1,1-DCE) IS THE SAME AS THE MCL FOR THAT SUBSTANCE. BECKMAN CONSIDERED IT IS UNNECESSARY TO SET A CLEAN-UP GOAL LOWER THAN EPA'S MCLG WHEN THE MCLG, BY ITS DEFINITION, IS THE LEVEL OF THE CHEMICAL AT WHICH EPA HAS DETERMINED IT POSES NO KNOWN OR ANTICIPATED ADVERSE HEALTH EFFECT AND ALLOWS AN ADEQUATE MARGIN OF SAFETY.

**EPA RESPONSE:** EPA HAS CONSIDERED THESE COMMENTS AND IS SELECTING MCLS AS CLEAN-UP GOALS FOR THIS SITE.

3. SUPERVISOR REED URGED EPA TO ADOPT CLEAN-UP METHODOLOGIES AND CRITERIA THAT WILL ASSURE HEALTH AND ENVIRONMENTAL PROTECTION WHILE STILL ALLOWING A MEASURE OF REASONABLENESS. SUPERVISOR REED SAID HE DID NOT FEEL OBLIGATED TO FORCE THE LIMITS OF TECHNOLOGY NOR DOES HE CONSIDER A TOTALLY RISK-FREE SOCIETY ATTAINABLE.

**EPA RESPONSE:** EPA HAS CONSIDERED THESE COMMENTS AND BELIEVES THAT SELECTION OF MCLS AS CLEAN-UP GOALS PROVIDES ADEQUATE PROTECTION TO PUBLIC HEALTH AND THE ENVIRONMENT.

4. TULARE COUNTY DEH COMMENTED THAT IT BELIEVED EPA'S PROPOSED CLEAN-UP GOALS WERE EXTREMELY CONSERVATIVE. DEH SUPPORTED SETTING CLEAN-UP GOALS OR POSSIBLY 10 PERCENT LOWER. DEH QUESTIONED WHETHER THE AQUITARD SEDIMENTS WOULD RELEASE ENOUGH OF THE CONTAMINANTS TO EVER GET DOWN TO THE .5 PPB LEVEL IN THE AQUITARD AND AQUIFERS.

**EPA RESPONSE:** EPA HAS CONSIDERED THESE COMMENTS AND IS SELECTING AS CLEAN-UP GOALS. THE EFFECTIVENESS OF THE PUMP AND TREAT SYSTEM WILL BE REVIEWED WITHIN FIVE YEARS.

5. SENATOR VIUCH SAID SHE WOULD BE SUPPORTIVE OF CLEAN-UP GOALS MORE STRINGENT THAN MCLS (POSSIBLY AS LOW AS .5 PPB) IF RESEARCH EXISTED THAT DEMONSTRATED SIGNIFICANT HEALTH BENEFITS DUE TO THE LOWER CONCENTRATIONS. DEH COMMENTED THAT IT BELIEVES THE ADDITIONAL HEALTH BENEFITS TO BE REALIZED DUE TO THE .5 PPB CLEAN-UP GOAL VS. MCLS TO BE MORE THEORETICAL THAN ACTUAL.
EPA RESPONSE: EPA HAS CONSIDERED THESE COMMENTS AND IS SELECTING MCLS AS CLEAN-UP GOALS FOR THIS SITE.

6. SEVERAL RESIDENTS COMMENTED TO THE EFFECT THAT DRINKING WATER STANDARDS (MCLS) WERE SUFFICIENT UNTIL THERE WAS PROOF OF HEALTH DAMAGE. SEVERAL RESIDENTS VOICED THE BELIEF THAT IF MCLS ARE GOOD ENOUGH FOR DRINKING WATER AND THAT THE CITY OR A WATER COMPANY CAN PIPE WATER TO THEM AT MCLS, THEN IT SHOULD BE GOOD ENOUGH FOR THE GROUNDWATER WHERE, AS ONE PERSON SAID, "MOTHER NATURE IS CONTINUALLY WORKING ON IT".

EPA RESPONSE: EPA HAS CONSIDERED THESE COMMENTS AND IS SELECTING MCLS AS THE CLEAN-UP GOALS FOR THIS SITE.

7. DHS COMMENTED THAT IT UNDERSTOOD 1,2-DCA WAS ALSO PRESENT NEAR THE FACILITY. DHS OBSERVED THAT THE CALIFORNIA MCL (CMCL) FOR 1,2-DCA IS .5 PPB AND, AS SUCH, THEY WOULD CONCUR WITH EPA'S PROPOSED CLEAN-UP GOAL. DHS STATED, HOWEVER THAT IF THE PRESENCE OF 1,2-DCA IS FOUND TO BE INSIGNIFICANT OR APPEARS ISOLATED, EPA MAY WANT TO "REVIEW" ITS PROPOSED CLEAN-UP GOAL.

EPA RESPONSE: ALTHOUGH 1,2-DCA HAS NOT BEEN SELECTED AS A CONTAMINANT OF CONCERN, IT HAS BEEN DETECTED SPORADICALLY AT THE BECKMAN SITE. THE SOURCE OF THE CONTAMINANT IS UNKNOWN, HOWEVER, AND ADDITIONAL INVESTIGATION WILL BE REQUIRED TO DETERMINE THE SOURCE SUCH THAT CLEAN-UP GOALS CAN BE ESTABLISHED AT THE SOURCE.


EPA RESPONSE: EPA AGREES WITH THE COMMENT. CLEAN-UP GOALS WILL BE APPLIED TO ALL UNITS WHICH ARE POTENTIAL DRINKING WATER SOURCES. THE EFFECTIVENESS OF PUMP AND TREAT TECHNOLOGY IN REMOVING CONTAMINANTS TO MCLS WILL BE REVIEWED WITHIN FIVE YEARS.

9. THE RWQCB RECOMMENDED THAT CLEAN UP LIMITS BE SET AT LEAST AS LOW AS THE FEDERAL AND STATE DRINKING WATER STANDARDS, HOWEVER THEY STATE THAT FINAL CLEAN UP LIMITS BE DETERMINED AFTER "...CONSIDERATION OF THE COST OF ACHIEVING EACH ADDITIONAL INCREMENT OF CLEANUP BELOW DRINKING WATER STANDARDS AND THE BENEFIT TO THE ENVIRONMENT OF THAT INCREMENT." THEY FURTHER RECOMMENDED THAT "... THE UPPER AQUIFER BE REMEDIATED BELOW DRINKING WATER STANDARDS UNTIL IT CAN BE DEMONSTRATED BY BECKMAN INSTRUMENTS THAT BENEFIT TO THE ENVIRONMENT NO LONGER JUSTIFIES THE ECONOMICS OF ADDITIONAL CLEANUP EFFORTS."

EPA RESPONSE: EPA HAS CONSIDERED THESE COMMENTS. EPA IS SELECTING MCLS AS CLEAN UP GOALS FOR THIS SITE.

ENDANGERMENT ASSESSMENT

BECKMAN, TULARE COUNTY DEH, AND SEVERAL INDIVIDUALS COMMENTED TO CRITICIZE THE ENDANGERMENT ASSESSMENT (EA) FOR THE SITE PREPARED BY EPA AND ITS CONTRACTOR. THESE COMMENTORS GENERALLY SAID THAT THE EA IS SERIOUSLY FLAWED AND SHOULD BE REVISED. MOST COMMENTORS SAID THAT THE
MATERIALS RELIED UPON IN THE EA ARE FACTUALLY OUTDATED (I.E. THE ASSUMED 1986 SHUT-DOWN OF EXISTING PUMP AND TREATMENT SYSTEMS) AND GROSSLY UNREALISTIC. SEVERAL COMMENTORS NOTED THAT THIS VERY ADMISSION IS STATED IN THE EA ITSELF.

THE ENDANGERMENT ASSESSMENT PREPARED FOR THIS SITE FOLLOWS THE PROCEDURES AND METHODS SPECIFIED IN THE SUPERFUND PUBLIC HEALTH EVALUATION MANUAL. EPA IS REQUIRED BY THE NATIONAL CONTINGENCY PLAN (NCP) SECTION 300.68 (E) & (F) TO EVALUATE THE RISKS TO PUBLIC HEALTH AND THE ENVIRONMENT UNDER A NO ACTION SCENARIO. BECAUSE INTERIM REMEDIAL ACTION HAD ALREADY BEGUN AT THIS SITE, IT WAS NECESSARY TO SELECT A DATE A WHICH IT WAS ASSUMED THAT ALL ON-GOING TREATMENT SYSTEMS WERE TERMINATED AND UNRESTRICTED ACCESS TO CONTAMINATED GROUNDWATER WAS POSSIBLE. THIS DATE WAS AGREED TO BY BECKMAN AS AUGUST, 1986. THE RISKS DEVELOPED IN THE ENDANGERMENT ASSESSMENT (EA) WERE THEREFORE MAXIMUM RISKS WHICH COULD BE EXPERIENCED IN THE EVENT THE CURRENT SYSTEM WAS TERMINATED. AS THE PUBLIC IS AWARE, THIS SYSTEM HAS NOT BEEN TERMINATED (FOR THE UPPER AQUIFER), THUS THE RISK SCENARIOS DEVELOPED IN THE EA WERE NOT A REFLECTION OF ACTUAL CONDITIONS. HOWEVER IT WAS NECESSARY TO DEVELOP THESE RISK SCENARIOS TO BE CONSISTENT WITH NATIONAL EPA POLICY AND GUIDANCE.

2. TULARE COUNTY DEH COMMENTED THAT THE CONCEPT OF USING A RISK ASSESSMENT (HERE CALLED THE EA) ANALYSIS IS WELL FOUNDED AND THEY STRONGLY SUPPORT THE CONCEPT AND ITS OBJECTIVES DEH FELT THE BECKMAN EA DID NOT PROVIDE WORTHY SUPPORT OR JUSTIFICATION TO EITHER THE CONCEPT OR THE OBJECTIVES. DEH STATED THAT THE RATIONALE FOR DEVELOPING A "WORST CASE" SCENARIO AND ESTABLISHING REQUIREMENTS ON THAT BASIS IS DEFENSIBLE AND PROVIDES FOR SELECTING CONSERVATIVE STANDARDS OR CRITERIA. DEH SAID THAT THE EA FOR THE BECKMAN SITE DOES NOT PRESENT A CREDIBLE "WORST CASE", NOR DOES IT EVIDENCE SERIOUS SCIENTIFIC REVIEW. DEM OBSERVES THAT "THE EA APPEARS TO BE PRIMARILY A COMPILED OF BITS OF INFORMATION WITH IMPLIED SIGNIFICANCE BUT WITHOUT DISCERNIBLE SUPPORT BASES. IT APPEARS THAT THE REPORT WAS COMPILED FROM CURSORY LITERATURE SELECTIONS AND LACKED REVIEW BY HEALTH PROFESSIONALS."


3. BECKMAN COMMENTED THAT THE EA ERRONEOUSLY TREATED 1,1-DCE AS A CARCINOGEN. BECKMAN OBSERVED THAT THIS WAS CONTRARY TO MANY OTHER OFFICIAL STATEMENTS BY EPA. BECKMAN CITES, IN ADDITION TO STUDIES, EPA'S WORK PLAN FOR THE BECKMAN SITE WHICH STATES ON PAGE 2-32 THAT "EPA CONSIDERS THE DATA INSUFFICIENT TO CLASSIFY DCE AS CARCINOGENIC."

EPA RESPONSE: EPA HAS DETERMINED 1,1 DCE TO BE A CLASS C CARCINOGEN AND HAS DEVELOPED A CANCER POTENCY FACTOR (CPF) FOR THIS CHEMICAL. THE SUPERFUND OFFICE AT EPA (THE OFFICE OF SOLID WASTE AND EMERGENCY RESPONSE) HAS DEVELOPED A POLICY TO TREAT ALL CARCINOGENS AND RECOMMENDS INCLUDING THEM IN CALCULATIONS TO DETERMINE CUMULATIVE RISKS FOR A PARTICULAR SUPERFUND SITE.
4. BECKMAN ALSO COMMENTS THAT IT BELIEVES ITS RISK ASSESSMENT IS VALID AND SOUND. BECKMAN QUESTIONS WHY ITS RISK ASSESSMENT, WHICH WAS INCLUDED WITH ITS DRAFT FEASIBILITY STUDY (FS) FOR THE SITE WAS DISAVOWED BY EPA WITHOUT AN EXPLANATION. BECKMAN COMMENTS THAT EPA'S FS ADDENDUM FAILS TO DISCUSS EPA'S BASIS FOR DISREGARDING BECKMAN'S FINDINGS AND THAT BECKMAN FOLLOWED THE PUBLIC HEALTH EVALUATION MANUAL IN PREPARING ITS RISK ASSESSMENT.

EPA RESPONSE: EPA HAS DETERMINED THAT THE BECKMAN RISK ASSESSMENT DOES NOT FOLLOW THE PROCEDURES IN THE SUPERFUND PUBLIC HEALTH EVALUATION MANUAL BECAUSE NOT ALL EXPOSURE PATHWAYS WERE CONSIDERED. FOR EXAMPLE, NO INHALATION OR DERMAL EXPOSURE ROUTES WERE CONSIDERED ALTHOUGH THESE ROUTES ARE A MAJOR CONCERN DEALING WITH VOLATILE ORGANIC CHEMICALS (VOCs).

5. DR. JAMES LESSINGER COMMENTED THAT HE HAS CALLED THE "COMPANY THAT PUT THIS (EA) TOGETHER" TO VERIFY AND GET ADDITIONAL INFORMATION REGARDING MATERIALS CITED IN THE EA AND HAS NOT HAD HIS PHONE CALLS RETURNED. HE STATES THAT HE CALLED SPECIFICALLY TO GET A LIST OF THE REFERENCES THAT WERE EXTRACTED FROM TOX-LINE AND MED-LINE SEARCHES AS STATED IN THE EA.

EPA RESPONSE: THE EA WAS RELEASED BY THE ENVIRONMENTAL PROTECTION AGENCY. ANY ADDITIONAL INFORMATION CAN BE OBTAINED BY CONTACTING CAROLYN THOMPSON AT EPA'S REGIONAL OFFICE IN SAN FRANCISCO, CA.

OTHER IMPACTS

BECKMAN HAS COMMENTED THAT EPA, IN FORMULATING ITS PROPOSED PLAN FOR THE BECKMAN SITE HAS FAILED TO EVALUATE THE ADDITIONAL IMPLICATIONS OF SETTING UP CLEANUP GOALS LESS THAN MCLS INCLUDING THE ECONOMIC IMPACTS ON THE COMMUNITY AND THE PRECEDENTIAL EFFECT ON OTHER SUPERFUND AND STATE LEAD SITES.

ECONOMIC IMPACTS

1. PORTERVILLE'S MAYOR AND CHAMBER OF COMMERCE AS WELL AS SUPERVISOR REED, SENATOR VUICH, THE BANK OF SIERRA AND AT LEAST SIX (6) OTHER RESIDENTS COMMENTED ON THE NEGATIVE ECONOMIC IMPACT TO THE PORTERVILLE COMMUNITY THAT WOULD BE CAUSED BY EPA'S PROPOSED PLAN, IN PARTICULAR ITS PROPOSED GROUNDWATER CLEAN-UP GOALS. MOST COMMENTORS SAID THAT THE LENGTH OF TIME NECESSARY TO ACHIEVE THESE CLEAN-UP GOALS AS WELL AS THE NEGATIVE IMAGE ASSOCIATED WITH A COMMUNITY WITH GROUNDWATER CONTAMINATION PROBLEMS WOULD CAUSE RESIDENTS AND BUSINESSES IN AND AROUND PORTERVILLE TO SUFFER ENORMOUS AND UNNECESSARY ECONOMIC HARDSHIPS IN DESCRIBING THIS NEGATIVE IMAGE, SEVERAL COMMENTORS, INCLUDING MAYOR ENSSLIN, SUPERVISOR REED, SENATOR VUICH AND BECKMAN, DESCRIBED HOW PORTERVILLE'S EFFORTS TO ATTRACT NEW INDUSTRY AND DEVELOPMENT TO ITS ENTERPRISE ZONE WOULD SUFFER DUE TO THE EXPRESSED RELUCTANCE OF INDUSTRIES TO MOVE TO A COMMUNITY OR AREA BRANDED AS CONTAMINATED. ALSO DESCRIBED WAS THE POTENTIAL FOR NEGATIVE IMPACT ON THE SALES OF PRODUCE AND ANIMAL PRODUCTS FROM THE AREA BECAUSE OF FEAR THAT THESE PRODUCTS MAY BE "UNSAFE" DUE TO EXPOSURE TO THE CONTAMINATED GROUNDWATER. SEVERAL COMMENTORS ALSO SAID THAT LAND VALUES AND THE MARKETABILITY OF LAND FOR DEVELOPMENT WOULD BE HURT DUE
TO THE STIGMA OF BEING CONTAMINATED AND THE LONG TERM UNCERTAINTY OF WHEN, IF EVER, THE LAND WOULD ACTUALLY BE COMPLETELY CLEANED UP.

EPA RESPONSE: THE PURPOSE OF REMEDIAL ACTION IS TO ENSURE THAT CONTAMINATION FROM THE BECKMAN SITE IS REMOVED FROM GROUNDWATER AND SOIL. BECKMAN HAS ESTIMATED THAT THE UPPER AQUIFER WILL REACH MCL STANDARDS WITHIN A YEAR. THE SOIL CONTAMINATION CAN BE REMOVED IN LESS THAN ONE YEAR. THUS, THESE RESOURCES WILL BE RESTORED TO FULL BENEFICIAL USES. THE LOWER AQUIFER AND AQUIFARD WILL TAKE CONSIDERABLY LONGER TO REMEDY. HOWEVER, AS MOST HAVE COMMENTED, BECKMAN HAS TAKEN RESPONSIBILITY FOR THE SITE.

2. SUPERVISOR REED SAID THAT HE WAS CONCERNED EPA'S APPROACH CREATED A DISPROPORTIONATE FOCUS ON THE REMAINING SMALL PROBLEM WHICH MIGHT CONVEY AN INAPPROPRIATE IMAGE OF THE COMMUNITY. HE URGED EPA TO BALANCE ITS PRINTED MATERIAL IN THE SAME FASHION AS ITS ORAL PRESENTATIONS AT THE JUNE 22, 1989 PUBLIC MEETING IN PORTERVILLE.

EPA RESPONSE: EPA ACKNOWLEDGES THE COMMENT.

3. BECKMAN, AS WELL AS SEVERAL RESIDENTS, COMMENTED ON THE NEED TO REDEFINE THE AREAL EXTENT OF SITE BOUNDARIES. THESE COMMENTORS AGREED THAT IT WAS UNFAIR AND UNNECESSARY TO HAVE LARGE AREA OF LAND WITHIN THE ORIGINAL BECKMAN STUDY AREA REMAIN UNDER A "CLOUD OF CONTAMINATION" FOR THE 15 - 25 YEARS NECESSARY TO ACHIEVE THE CLEAN-UP GOALS. THESE COMMENTORS FEEL THIS IS ESPECIALLY INAPPROPRIATE GIVEN THE DRAMATIC SIZE REDUCTION OF THE CONTAMINATION PLUME IN THE UPPER AQUIFER DUE TO THE OPERATION OF BECKMAN'S PUMP AND TREAT SYSTEM. THESE COMMENTORS WANT EPA TO CLEARLY DELINEATE WHICH AREAS ARE CONTAMINATED AND WHICH ARE NOT AND TO REMOVE THESE NON-CONTAMINATED AREAS FROM THE STUDY AREA.

EPA RESPONSE: UNIT THE SITE AS A WHOLE IS DETERMINED TO BE FREE OF CONTAMINANTS, EPA WILL CONTINUE TO MONITOR THE REMEDIAL ACTION. AS PORTIONS OF THE SITE ARE CLEANED UP, EPA MAY CHOOSE TO ISSUE FACT SHEETS DESCRIBING THIS PROGRESS TO DATE. THESE FACT SHEETS ARE PURELY INFORMATIVE AND ARE NOT A WARRANTY NOR ARE THEY TO BE CONSIDERED AS A RELEASE OF ANY KIND.

4. SEVERAL COMMENTORS SAID THAT IT WAS UNFAIR TO "TIE UP" (ESSENTIALLY "FREEZING") PEOPLE'S LAND FOR 15 - 25 YEARS TO ATTAIN UNNECESSARY AND POSSIBLY UNATTAINABLE CLEAN-UP GOALS. THESE COMMENTORS ALSO OBJECTED TO HAVING THEIR LAND AVAILABLE FOR ACCESS BY SAMPLING AND TESTING PERSONNEL FOR AN INDETERMINATE LENGTH OF TIME.

EPA RESPONSE: EPA UNDERSTANDS THE INCONVENIENCE OF CONTINUED ACCESS FOR TESTING PURPOSES. HOWEVER, THE MISSION OF EPA IS TO DETERMINE THE EXTENT OF ANY CONTAMINATION AND WHETHER A THREAT OR POTENTIAL THREAT TO PUBLIC HEALTH AND THE ENVIRONMENT EXISTS. TO THIS END, EPA MUST CONTINUE TO OVERSEE THE REMEDIAL ACTION PROGRESS. ONCE AN AREA IS DETERMINED TO MEET CLEANUP GOALS, THE APPLICABLE OVERSIGHT SCHEDULE MAY BE REDUCED. FUTURE FACTS SHEETS WILL DESCRIBE THESE CHANGES.

5. BECKMAN SUGGESTED CREATING SEPARATE OPERABLE UNITS TO ADDRESS THE DIFFERENT CONTAMINANT PROBLEMS. BECKMAN SUGGESTED THAT THE UPPER AQUIFER BE REMOVED FROM THE NATIONAL PRIORITIES LIST (NPL) ONCE ITS CLEAN-UP GOAL HAD BEEN ACHIEVED.
EPA RESPONSE: EPA HAS DETERMINED THAT THE MOST EFFICIENT WAY TO ADDRESS THIS SITE IS TO IMPLEMENT CONCURRENT REMEDIAL ACTIONS FOR EACH AFFECTED MEDIA.

PRECEDENTIAL EFFECTS

1. BECKMAN, AS WELL AS SENATOR VUICH AND A RESIDENT, COMMENTED ON THE POTENTIAL PRECEDENTIAL IMPACT OF EPA’S PROPOSED CLEAN-UP GOALS AT THE BECKMAN SITE. BECKMAN CITED THE QUESTION EPA WILL FACE REGARDING THE APPLICABILITY OF THESE CLEAN-UP GOALS VS. MCLS TO OTHER SITES AROUND THE COUNTRY, INCLUDING THOSE SITES ON FEDERALLY OWNED OR OPERATED FACILITIES.

EPA RESPONSE: EPA ACKNOWLEDGES THESE COMMENTS. EPA HAS SELECTED MCLS AS CLEAN-UP GOALS.

2. BECKMAN ALSO SAID THAT EPA’S PROPOSED CLEAN-UP GOALS WOULD PLACE A CLOUD OVER THE ADEQUACY OF MCLS AS DRINKING WATER STANDARDS BY IMPLYING THAT MCLS AND MCLGS ARE NOT REALLY FULLY PROTECTIVE OF PUBLIC HEALTH.

EPA RESPONSE: EPA DOES NOT BELIEVE THAT THE PROTECTIVENESS OF MCLS OR MCLGS ARE QUESTIONED WHEN CLEANUP GOALS ARE ESTABLISHED AT LOWER LEVELS. SUPERFUND SITES OFTEN HAVE A COMPLEX MIXTURE OF CHEMICALS REQUIRING CLEANUP LEVELS MORE STRINGENT THAN MCLS DUE TO THE ADDITIVE NATURE OF CARCINOGENIC RISK. EPA, HOWEVER, HAS ELECTED TO ESTABLISH MCLS AS CLEAN-UP GOALS AT THIS SITE.

3. BECKMAN ALSO COMMENTED THAT REJECTION OF MCLS AS CLEAN-UP GOALS CALLS INTO QUESTION THE ADEQUACY OF REMEDY SELECTION AT OTHER SITES WHERE MCLS HAVE ALREADY BEEN SELECTED, INCLUDING STATE LEAD SITES.

EPA RESPONSE: EACH SUPERFUND SITE IS UNIQUE AND MUST BE EVALUATED INDIVIDUALLY. SEE RESPONSE TO COMMENT #2.

PUBLIC PARTICIPATION PROCESS

BECKMAN, AS WELL AS SEVERAL LOCAL RESIDENTS, SUBMITTED COMMENTS REGARDING EITHER THE AMOUNT OF TIME AVAILABLE TO THEM DURING THE PUBLIC COMMENT PERIOD TO REVIEW EPA’S PROPOSED PLAN AND RELATED DOCUMENTS AND PREPARE COMMENTS OR THE AVAILABILITY OF PUBLIC NOTICE REGARDING SITE ACTIVITIES, IN PARTICULAR THE SCHEDULING OF THE PUBLIC MEETING AND THE PUBLIC COMMENT PERIOD.

PUBLIC COMMENT PERIOD

1. BECKMAN STATES THAT THEY HAVE BEEN DENIED A REASONABLE OPPORTUNITY TO PREPARE AND SUBMIT WRITTEN AND ORAL COMMENTS ON EPA’S PROPOSED PLAN AND RELATED SITE MATERIALS AS REQUIRED BY SARA/CERCLA. BECKMAN CITES SEVERAL EXAMPLES INCLUDING THAT THE SITE’S ADMINISTRATIVE RECORD WASN’T AVAILABLE TO IT UNTIL FOUR (4) DAYS AFTER THE START OF THE PUBLIC COMMENT PERIOD, AND THAT EPA HAS FAILED TO RESPOND TO BECKMAN’S FOIA REQUESTS FOR ADDITIONAL MATERIALS.

2. BECKMAN EXPRESSES ITS APPRECIATION TO EPA FOR THE ONE WEEK EXTENSION OF THE PUBLIC COMMENT PERIOD BUT STATES THAT IT NEEDED AN ADDITIONAL THIRTY (30) DAYS TO CONDUCT A THOROUGH ANALYSIS OF EPA'S PROPOSED PLAN AND ADMINISTRATIVE RECORD AND PREPARE EXTENSIVE COMMENTS.

EPA RESPONSE: EPA BELIEVES THAT THE PUBLIC COMMENT PERIOD PROVIDED AMPLE OPPORTUNITY TO COMMENT ON THE REMEDIAL ALTERNATIVES DESCRIBED IN THE PROPOSED PLAN AND IN BECKMAN'S FS. EPA PROVIDED MORE TIME THAN IS REQUIRED UNDER THE CURRENT OR PROPOSED NATIONAL CONTINGENCY PLAN (NCP).

3. BECKMAN ALSO DESCRIBES INFORMATION MISSING FROM THE ADMINISTRATIVE RECORD WHICH IT BELIEVES SHOULD BE INCLUDED. THIS MATERIAL INCLUDES ALL CORRESPONDENCE BETWEEN EPA AND BECKMAN AND ALL CORRESPONDENCE BETWEEN BECKMAN AND OTHERS REGARDING THE SITE WHERE EPA RECEIVED COPIES OF THE MATERIALS. BECKMAN ALSO SUBMITTED ADDITIONAL DOCUMENTS WITH ITS WRITTEN COMMENTS THAT WERE USED IN PREPARING ITS COMMENTS FOR INCLUSION IN THE ADMINISTRATIVE RECORD.

EPA RESPONSE: BECKMAN SHOULD CONTACT EPA WITH THE INFORMATION IT BELIEVES IS MISSING FROM THE ADMINISTRATIVE RECORD. EPA WILL REVIEW THIS INFORMATION AND PLACE THE APPROPRIATE MATERIAL IN THE RECORD.

PUBLIC NOTICE


EPA RESPONSE: IMPLEMENTATION OF THE REMEDIAL ACTION SPECIFIED IN THIS ROD WILL ENSURE THAT THE PLUME OF CONTAMINATION IN THE LOWER AQUIFER WILL NOT SPREAD AND THAT WATER SUPPLIES OUTSIDE THE ZONE OF CONTAMINATION ARE SAFE FOR ALL PURPOSES.

2. TWO (2) COMMENTORS SAID THAT THEY LEARNED ABOUT THE CONTAMINATION PROBLEM FROM THEIR NEIGHBORS AND DIDN'T RECEIVE EPA'S "PACKET" (FACT SHEET) IN THE MAIL AND BELIEVED THAT ONLY A FEW PEOPLE DID.

EPA RESPONSE: EPA MAILED OVER 1100 FACT SHEETS TO RESIDENTS OF THE PORTERVILLE COMMUNITY; 92 WERE MAILED FROM EPA'S MAILING LIST AND OVER
1000 WERE MAILED TO RESIDENTS IN THE SITE VICINITY ACCORDING TO ZIP CODE. EPA ALSO ISSUED SEVERAL PRESS RELEASES DESCRIBING THE MATERIAL AVAILABLE AT THE PUBLIC LIBRARY. EPA APOLOGIZES TO THOSE RESIDENTS WHO DID NOT RECEIVE FACT SHEETS AND HOPES THAT ALL INTERESTED INDIVIDUALS HAD A CHANCE TO PROVIDE THEIR COMMENTS.

OTHER CONCERNS

OTHER CONCERNS COMMENTED ON INCLUDE THE NEED TO BE FAIR TO BECKMAN IN PRESCRIBING CLEAN-UP GOALS, EPA'S CREDIBILITY WITH PORTERVILLE'S COMMUNITY MEMBERS, HEALTH CONCERNS AND REQUESTS FOR WATER WELL TESTING.

FAIRNESS

1. THIS ISSUE WAS SECOND ONLY TO THE QUESTION OF APPROPRIATE CLEAN-UP GOALS IN DRAWING COMMENTS FROM PORTERVILLE COMMUNITY MEMBERS. MAYOR ENSSLIN, SUPERVISOR REED, ASSEMBLYMAN JONES, DR. LESSINGER ALONG WITH ELEVEN (11) RESIDENTS SPOKE TO THE NEED FOR EPA TO BE FAIR TO BECKMAN IN PRESCRIBING CLEAN-UP GOALS.

MOST COMMENTORS INCLUDING MAYOR ENSSLIN AND ASSEMBLYMAN JONES SAID THAT BECKMAN HAD DONE AN OUTSTANDING (EXEMPLARY, "WORLD CLASS") JOB IN ADDRESSING ITS CONTAMINATION PROBLEMS, AND THAT THEY SHOULD NOT BE TAKEN ADVANTAGE OF. THEY CITED BECKMAN'S EARLY PRO-ACTIVE RESPONSE TO THE DISCOVERY OF GROUNDWATER CONTAMINATION AND THE INSTALLATION OF ITS PUMP AND TREAT SYSTEMS WHICH HALTED THE SPREAD AND REDUCED THE EXTENT OF CONTAMINATED GROUNDWATER. THEY OBSERVED THAT BECKMAN COMMITTED SUBSTANTIAL RESOURCES TO THE PROBLEM MANY YEARS EARLIER THAN IT WOULD HAVE BEEN REQUIRED TO DO SO UNDER THE SUPERFUND PROGRAM. THESE COMMENTORS CITED THE MILLIONS OF DOLLARS BECKMAN HAS SPENT IN RESPONSIBLY ADDRESSING THE CONTAMINATION PROBLEMS, INCLUDING PROVIDING BOTTLED WATER AND CITY WATER HOOKUPS TO AFFECTED HOUSEHOLDS AND SAID THAT IT WAS UNFAIR TO REQUIRE BECKMAN TO SPEND MANY MORE MILLIONS OF DOLLARS AND YEARS OF WORK TO ACCOMPLISH UNREALISTIC AND UNNECESSARY CLEAN-UP LEVELS. THESE COMMENTORS GENERALLY URGED EPA TO, AS ONE COMMENTOR AT THE PUBLIC MEETING EXPRESSED, "SET REASONABLE STANDARDS AND GET OFF THEIR BACKS"

EPA RESPONSE: EPA SETS CLEAN-UP GOALS TO PROTECT PUBLIC HEALTH AND THE ENVIRONMENT. EPA AGREES THAT BECKMAN HAS BEEN RESPONSIBLE IN ADDRESSING THE CONTAMINATION CAUSED BY THEIR OPERATIONS.

2. SEVERAL COMMENTORS MENTIONED THAT IN SETTING WHAT APPEARS TO BE GROSSLY UNFAIR AND UNNECESSARY CLEAN-UP GOALS FOR THE BECKMAN SITE, EPA APPEARS TO BE BE PUNISHING A COMPANY WHO HAS ACTED AS A RESPONSIBLE CORPORATE CITIZEN AND HAS PRO-ACTIVELY AND EFFECTIVELY ADDRESSED ITS CONTAMINATION PROBLEMS. IN ESSENCE, "PUNISHING THEM FOR DOING A GOOD JOB". SUPERVISOR REED OBSERVED THAT HE WAS AWARE OF THE NEED FOR SPECIFIC PROCESSES TO BE REQUIRED IN PRESCRIBING HOW GOVERNMENT AGENCIES CARRY OUT THEIR RESPONSIBILITIES AND DEAL WITH THE PUBLIC BUT OBSERVED THAT, ABSENT SOME ABILITY TO BE FLEXIBLE AND PROVIDE ALTERNATIVE PROVISIONS FOR COOPERATIVE, GOOD-CITIZEN COMPANIES, THESE MANDATED PROCESSES CAN SEEM UNFAIR AND CREATE CONFUSION AND CONCERN AMONG A COMMUNITY'S CITIZENS.

EPA RESPONSE: SEE RESPONSE TO COMMENT NUMBER 1.
3. SEVERAL COMMENTORS STATED THAT BECKMAN CAN BE RELIED ON TO ACCOMPLISH ANY REASONABLE CLEAN-UP ACTIVITY AND SHOULD BE ALLOWED TO CONTINUE AND COMPLETE THEIR EXISTING CLEAN-UP PLAN.

**EPA RESPONSE:** EPA BELIEVES THAT BECKMAN WILL BE COOPERATIVE IN REACHING A FINAL CLEAN-UP AGREEMENT FOR THIS SITE. PART OF THE REMEDIAL ACTION WILL BE TO CONTINUE THEIR EXISTING PUMP AND TREAT SYSTEM FOR THE UPPER AQUIFER.

4. ONE (1) RESIDENT WROTE TO SAY THAT IF BECKMAN HAS TO MEET THE .5 PPB CLEAN-UP GOAL THEN THE CITY AND ALL WATER COMPANIES SHOULD HAVE TO MEET THE SAME REQUIREMENTS.

**EPA RESPONSE:** AS DISCUSSED IN AN EARLIER RESPONSE, ALL SUPERFUND SITES ARE UNIQUE AND EVALUATED INDIVIDUALLY. PUBLIC WATER SUPPLY SYSTEMS HAVE TO MEET STANDARDS SET UNDER THE CLEAN WATER ACT, MOST NOTABLY MCLS. AS NOTED EARLIER, EPA IS SELECTING MCLS AS CLEAN-UP GOALS FOR THIS SITE.

5. THE PORTERVILLE CHAMBER OF COMMERCE EXPRESSED CONCERN THAT IT APPEARED THAT PORTERVILLE WAS BEING SINGLED OUT FOR A CLEAN-UP PROCESS THAT GOES FAR BEYOND THE NORM.

**EPA RESPONSE:** EPA ESTABLISHES CLEAN-UP GOALS TO PROTECT PUBLIC HEALTH AND THE ENVIRONMENT. IN THIS CASE, EPA HAS SELECTED MCLS AS CLEAN-UP GOALS AFTER REVIEWING ALL THE INFORMATION AND CONSIDERING PUBLIC COMMENT.

**EPA'S CREDIBILITY**

1. ONE RESIDENT EXPRESSED CONCERN THAT EPA'S PROPOSED CLEAN-UP LEVELS AT BECKMAN APPEAR TO BE DRIVEN BY OUTSIDE INFLUENCES, SPECIFICALLY CONGRESSIONAL DISSATISFACTION WITH EPA OR EPA'S RECENT INVOLVEMENT IN THE ALAR CONTROVERSY. THIS COMMENTOR SUGGESTED THAT EPA WAS ATTEMPTING TO LOOK GOOD BY ZEALOUSLY SETTING VERY CONSERVATIVE CLEAN-UP LEVELS AT DETECTION LIMITS.

**EPA RESPONSE:** EPA'S CLEAN-UP PROPOSAL IS CONSISTENT WITH EPA'S REGULATIONS, POLICY AND GUIDANCE.

2. A RESIDENT SUGGESTED THAT EPA IS SO GEARED UP TO CONFRONT UNCOOPERATIVE COMPANIES THAT IT IS UNPREPARED TO DEAL WITH A COMPANY WHO STARTED CLEAN-UP BEFORE EPA GOT INVOLVED AND HAS MADE "DOING THE JOB RIGHT" A CORPORATE PRIORITY. THIS SAME COMMENTOR ALSO SUGGESTED THAT SINCE IT RARELY, IF EVER, HAPPENS THAT EPA HAS DECLARED A SITE CLEAN, THAT EPA IS SIMPLY NOT PREPARED TO SAY WHEN IT IS FINISHED.

**EPA RESPONSE:** EPA DEALS WITH ALL COMPANIES ON AN EQUAL BASIS. THE CRITERIA FOR DETERMINING WHEN THE SITE HAS BEEN CLEANED UP WILL BE DISCUSSED BETWEEN BECKMAN AND EPA IN UPCOMING NEGOTIATIONS.

3. ONE INDIVIDUAL COMMENTED THAT EPA "AMBUSHED ITS OWN CREDIBILITY" WITH THE MATERIALS IN THE ENDANGERMENT ASSESSMENT AS WELL AS ON OTHER ISSUES. HE STATED THAT HE "CANT BELIEVE A THING THEY SAY".

**EPA RESPONSE:** EPA ACKNOWLEDGES THE COMMENT.
HEALTH CONCERNS

1. THREE (3) RESIDENTS COMMENTED ABOUT GENERAL HEALTH CONCERNS THEY HAD FOR THEMSELVES AND THEIR FAMILIES REGARDING PAST AND POTENTIAL FUTURE CONSUMPTION OF CONTAMINATED GROUNDWATER. ONE (1) COMMENTOR STATED THAT HER HUSBAND HAD DIED OF CANCER AND ANOTHER COMMENTED ON THE "SCUM AWFUL TASTE" OF HER WELL WATER CURRENTLY.

**EPA RESPONSE:** EPA ACKNOWLEDGES THE COMMENT. THE SITE CONTAMINANTS ARE TASTELESS IN THE CONCENTRATIONS FOUND AT THIS SITE, HOWEVER THE COMMENTOR COULD HAVE THE WELL TESTED.

2. ONE (1) COMMENTOR SAID THAT ALTHOUGH THEY HAVE BEEN HOOKED UP TO THE CITY WATER SYSTEM FOR HER HOUSE, SHE USES WELL WATER TO IRRIGATE HER GARDEN AND WAS CONCERNED ABOUT HEALTH RISKS POSED BY EATING THE GARDEN VEGETABLES.

**EPA RESPONSE:** IN THE EA CONDUCTED FOR THIS SITE, THE MAXIMUM PLAUSIBLE RISK ASSOCIATED WITH EATING CONTAMINATED PRODUCE WOULD BE 8.8X (10^-6) OR 8.8 CHANCES IN A MILLION. THIS IS WELL WITHIN EPA'S RISK RANGE OF (10^-4) TO (10^-7). IT IS EXPECTED THAT THE POTENTIAL RISK TO THIS COMMENTOR TO BE MUCH LESS THAN WHAT WAS ESTIMATED IN THE EA, HOWEVER EPA WOULD BE WILLING TO DISCUSS THIS FURTHER WITH THE COMMENTOR.

3. FIVE (5) COMMENTORS REQUESTED THAT THEIR WELLS BE TESTED FOR THE PRESENCE OF CONTAMINANTS. ONE OF THE COMMENTORS WAS THE WOMAN WHOSE HUSBAND HAD DIED OF CANCER. ONE COMMENTOR STATED THAT SHE HAD REQUESTED WELL TESTING BEFORE AND HAD BEEN TOLD IT WOULD BE DONE BUT IT HAD NEVER HAPPENED.

**EPA RESPONSE:** EPA HAS BEEN REQUESTED TO TEST RESIDENTIAL WELLS SOUTH AND SOUTHWEST OF THE BECKMAN PLANT. ALTHOUGH THE DATA CURRENTLY GATHERED DO NOT SUGGEST THAT CONTAMINATION HAS SPREAD THAT FAR, EPA HAS CONTACTED ALL THOSE COMMENTORS AND WILL BE TESTING THEIR WELLS IN THE NEAR FUTURE.

MISCELLANEOUS CONCERNS

1. ONE (1) COMMENTOR EXPRESSED ANGER THAT SHE HADN'T RECEIVED ANY MONETARY SETTLEMENT FROM BECKMAN BECAUSE SHE DIDN'T KNOW HOW TO FILE FOR IT. SHE OBSERVED THAT OTHERS ON HER STREET HAD RECEIVED SUCH SETTLEMENTS.

**EPA RESPONSE:** EPA SUGGESTS THAT THIS COMMENTOR CONTACT PRIVATE LEGAL COUNSEL FOR ADVISE ON HOW TO PROCEED.

D. REMAINING CONCERNS

EPA IS CURRENTLY NOT AWARE OF ANY ISSUES OR CONCERNS THAT HAVE NOT BEEN ADDRESSED DURING THE RI/FS AND REMEDIAL PLANNING ACTIVITIES.
ATTACHMENT
COMMUNITY RELATIONS ACTIVITIES
AT BECKMAN INSTRUMENTS

COMMUNITY RELATIONS ACTIVITIES CONDUCTED AT BECKMAN INSTRUMENTS TO DATE
HAVE INCLUDED:

* JOINT PRESS CONFERENCE TO ANNOUNCE EARLY SAMPLING RESULTS HELD
  BOARD, DHS AND BECKMAN (SUMMER 1983).

* EPA CONDUCTED COMMUNITY INTERVIEWS WITH LOCAL LEADERS AND
  COMMUNITY MEMBERS (OCTOBER 1986).

* EPA ESTABLISHED AN INFORMATION REPOSITORY AT THE PORTERVILLE
  CITY LIBRARY.

* EPA PREPARED AND DISTRIBUTED A FACT SHEET ON THE AVAILABILITY
  OF THE RI/FS WORK PLAN FOR REVIEW (MARCH 1987).

* EPA PREPARED AND DISTRIBUTED A FACT SHEET UPDATE #1 TO
  ANNOUNCE THE REGIONAL BOARD'S PROPOSED WASTE DISCHARGE
  REQUIREMENTS FOR BECKMAN'S PROPOSED GROUNDWATER EXTRACTION,
  TREATMENT AND DISCHARGE SYSTEM (MAY 1987).

* EPA PREPARED A COMMUNITY RELATIONS PLAN (AUGUST 1987).

* EPA PREPARED AND DISTRIBUTED A FACT SHEET DESCRIBING THE
  AVAILABILITY OF THE DRAFT FEASIBILITY STUDY AND EPA'S PROPOSED
  PLAN FOR PUBLIC REVIEW AND COMMENT (JULY 1989).

* EPA CONDUCTED A BRIEFING WITH PORTERVILLE'S LOCAL LEADERS TO
  EXPLAIN EPA'S PROPOSED PLAN FOR THE BECKMAN SITE (JUNE 1989).

* EPA CONDUCTED A PUBLIC MEETING AND PUBLIC COMMENT PERIOD TO
  EXPLAIN ITS PROPOSED PLAN, ANSWER QUESTIONS AND RECEIVE THE
  COMMUNITY'S COMMENTS, (JUNE/JULY 1989).

ROD ID # EPA/ROD/89-89/042(ESD) Site: Beckman Instruments

ROD Date: 09/26/1989 EPA ID: CAD048645444

ESD Date 3/6/91
Beckman Instruments Superfund Site
Porterville, California

EXPLANATION OF SIGNIFICANT DIFFERENCES

I. INTRODUCTION

On September 26, 1989, the United States Environmental Protection Agency (EPA) signed a Record of Decision (ROD) for the final remedy at the Beckman Instruments Inc. Superfund Site ("Beckman Site") in Porterville, California. The purpose of this document is to explain the significant differences between the description of the remedy selected in the ROD signed on September 26, 1989 and the remedy that will be implemented at the Beckman Site. This difference is not a fundamental alteration of the remedy described in the 1989 ROD.

Under Section 117 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, (CERCLA), 42 U.S.C. 9617, and pursuant to 40 C.F.R. Section 300.435(c)(2)(i) (55 Fed.Reg. 8668, 8852 (March 8, 1990)), EPA is required to publish an Explanation of Significant Difference (ESD) whenever a significant (but not fundamental) change is made to a final remedial action plan as described in a ROD. <Footnote>1 If the changes made after the ROD was signed had fundamentally altered the nature of the selected remedy, then a ROD amendment would have been required. 40 C.F.R. [Para] 300.435(c)(2)(ii) (1980) (55 Fed. Reg. 8668, 8852 (March 8, 1990)).</footnote>

This document provides a brief background of the Beckman Site, a summary of the remedy selected in the ROD, a description of the change to the ROD that EPA is now making (including how the change affects the remedy originally selected by EPA in the 1989 ROD), and an explanation of why EPA is making these changes to the ROD.

Based on the technical data in the administrative record, EPA is changing the ROD to provide that the contaminant-specific numerical levels characterized as "goals" in the 1989 ROD are established as final cleanup "standards" to be achieved by the selected remedy. Specifically, EPA is revising language in the 1989 ROD that states that the remedy for groundwater is "pumping and treating of all three units, to the extent practicable" by deleting the phrase "to the extent practicable." This change is made to clarify and ensure that EPA has selected in the ROD a specific remedial action for groundwater cleanup rather than deferring the selection of cleanup standards to a later date.

The technical data in the administrative record supports this remedy. There is not sufficient information in the record to indicate that it is currently technically impracticable to implement the remedy selected.

EPA has provided a fifteen (15) day comment period to the State of California (in accordance with 40 C.F.R. [Para] 300.515(h)(3)) and the State has concurred on this ESD. Pursuant to 40 C.F.R. [Para] 300.435(c)(2)(i)(1990), a public comment period is not required for an ESD.

II. BACKGROUND

The following is a brief background of the Beckman Site and a short summary of the remedy selected in the ROD. Additional background information can be found in the September 26, 1989 ROD and in the Beckman Administrative Record.

A. Site Background and Description

The Beckman Site, which includes the Beckman Plant and surrounding study area, is located near the southern limit of the City of Porterville, California. Porterville is located in Tulare County about 25 miles southeast of Visalia on the eastern fringe of California's Central Valley. The
Beckman Plant is located at 187 West Poplar Avenue and occupies approximately 12.5 acres of a 30.95 acre parcel of land owned by Beckman Instruments, Inc. The Site study area is generally bounded by the Tule River to the north, plant property to the east, Poplar ditch to the south and Newcombe Drive to the west. Land use within the study area includes residential, field crop, orchard, grazing land, Tule River floodway, commercial, industrial and vacant land.

The Beckman plant has manufactured electronic instrument assemblies, subassemblies and printed circuit boards in Porterville since 1967. Its industrial processes include electroplating and degreasing. The waste streams from these processes have included spent halogenated solvents, inorganic and acid solution, salts, metal-laden solutions and plating bath sludge.

Wastewater from the industrial processes conducted at the Site was discharged to the City of Porterville sewer system between 1967 and 1974. From 1974 until early 1983, various waste streams were discharged to an on-site solar evaporation pond. Wastes also may have been placed in other areas near the plant. Since 1983, waste streams have been treated on-site and treated liquids are discharged to the City of Porterville sewer system.

Beckman initiated groundwater monitoring in the vicinity of the solar pond in 1982. Water samples analyzed in May 1983 revealed the presence of some organic compounds and metals in groundwater below the unlined solar pond and in domestic wells downgradient of the plant. The pond was closed in 1983.

In March 1985, the California Department of Health Services (DHS) placed the Site on California’s Superfund State Priority Ranking List. On October 9, 1985 EPA received an official request by DHS to assume the lead role in overseeing remedial studies and cleanup activities at the Site. The Site was added to the Federal Superfund National Priorities List (NPL) by EPA on June 10, 1986, by notice in the Federal Register, Volume 51, No. 111.

Beckman submitted the Remedial Investigation (RI) report to EPA in December 1986. The Feasibility Study (FS) report prepared by Beckman, and as amended by EPA, was released for public comment in March 1988. EPA’s Proposed Plan was released for public review in June 1989.

The RI report indicated the existence of a multilayer aquifer system beneath and downgradient of the plant. The aquifer system is comprised of an “upper aquifer”, “upper aquitard” and “lower aquifer”, based on the order of occurrence of the units below ground surface and the hydraulic characteristics of the units. Five primary contaminants have been identified in groundwater at the Site. These volatile organic compounds (VOCs) include 1,1,1-trichloroethane (TCA), 1,1-dichloroethylene (DCE), freon 113, 1,1-dichloroethane (1,1-DCA), and trichloroethylene (TCE). Other contaminants such as 1,2-dichloroethane and benzene have been sporadically detected in groundwater in and surrounding the Site. Soil samples were identified with lead concentrations above the cleanup level established in the ROD.

Prior to the discovery of chemicals in the groundwater, groundwater below the site area was used for domestic and agricultural purposes. After discovery of chemicals in groundwater, Beckman provided alternate water supplies to approximately 300 residences in the study area. Eight private wells which were completed in the upper and lower aquifers were also sealed or replaced with wells screened in the lower aquifer to prevent further spread of contamination.

Beckman began extraction and treatment via air stripping of groundwater in July 1985 to contain western migration of the plume, control water level gradients in the upper aquifer, and reclaim upper aquifer groundwater. Beckman commenced operation of a second containment and reclamation system in the eastern portion of the Site in July 1987.
B. REMEDY SELECTED IN THE 1989 ROD

1. Groundwater. The selected remedy for groundwater in the upper aquifer, upper aquitard, and lower aquifer is extraction and treatment. Extracted groundwater is to be treated using air stripping towers. The air stripping towers will meet substantive permitting requirements set by the local Air Quality Management District to regulate emissions. Treated groundwater will be discharged to on-site infiltration ponds. These discharges will be regulated by the National Pollutant Discharge Elimination System (NPDES) under the Clean Water Act.

EPA set groundwater cleanup goals for the upper aquifer, upper aquitard and lower aquifer at federal Maximum Contaminant Limits (MCLs), except where state MCLs are more stringent (as is the case for 1,1-DCA). Where no federal or state MCL exists for a contaminant, state action levels (SALs) were selected as the cleanup goal (this is the case for Freon-113). The specified cleanup goals are as follows:

<table>
<thead>
<tr>
<th>Contaminant</th>
<th>Cleanup Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,1,1-TCA</td>
<td>200 ppb[2]</td>
</tr>
<tr>
<td>1,1-DCE</td>
<td>6 ppb</td>
</tr>
<tr>
<td>Freon-113</td>
<td>1,200 ppb</td>
</tr>
<tr>
<td>1,1-DCA</td>
<td>5 ppb</td>
</tr>
<tr>
<td>TCE</td>
<td>5 ppb</td>
</tr>
</tbody>
</table>

2 ppb = parts per billion

2. Soils. This ESD does not affect the soils remediation component of the September 26, 1989 ROD.

III. EXPLANATION OF SIGNIFICANT DIFFERENCES

This ESD is intended to clarify two points relating to EPA's ROD dated September 26, 1989. For the reasons explained below, this ESD amends two sentences in the ROD:

1. The sentence in the ROD (Section IX, page 22) that stated: "The remedy specified in this Record of Decision is pumping and treating of all three units, to the extent practicable," is amended to read:

"The remedy specified in this Record of Decision is pumping and treating of all three units."

2. Language in the ROD (Section IX, page 23) that stated: "This decision will be reviewed after the remedy has been in place five years to determine the feasibility of cleaning up the aquitard to MCLs," is amended to read:

"The remedial action selected in this Record of Decision shall be reviewed pursuant to the requirements of Section 121(c) of CERCLA, 42 U.S.C. 9621(c)."

A. Cleanup Standards. The amendment to the first sentence, above, is to make clear that the numerical "goals" set forth in the ROD for both groundwater and soil remediation at the Beckman Site constitute "cleanup standards" to be attained at the completion of the remedial action. EPA selected groundwater extraction and treatment to address the groundwater contamination. It specified five cleanup "goals" for groundwater in the upper and lower aquifers and the upper aquitard: 200ppb 1,1,1-TCA; 6ppb 1,1-DCE; 1200 ppb Freon 113; 5ppb TCE; 5ppb 1,1-DCA.
The ROD expressed these numerical levels as "goals", recognizing that it may not be possible to state with certainty the extent to which actual cleanup levels could be achieved in the more impermeable zones of the aquitard. As noted above, the ROD states that the remedy specified therein is "pumping and treating of all three units, to the extent practicable." The qualifying phrase "to the extent practicable" acknowledges the inherent uncertainty (that the remedial action will achieve cleanup levels."\footnote{3} Final cleanup levels are established either from ARARs, or by consideration of other factors, in the determination of final Remediation Goals, 40 C.F.R. Section 300.430(e).\footnote{4} that exists at the time a groundwater extraction treatment remedy or innovative treatment technology is selected.

In the Beckman ROD, Applicable or Relevant and Appropriate Requirements (ARARs) were used to establish the numerical cleanup "goals" (either as federal or state MCLs or State Action Levels). As required by Section 121(d)(2)(A) of CERCLA, these levels, referred to as "cleanup goals", are established as cleanup standards which must be attained by the completion of the remedial action. Accordingly, after re-evaluation of the administrative record and in light of the promulgation of the National Contingency Plan, by this ESD, EPA now unequivocally reaffirms that the groundwater remedy selected in the ROD shall attain all ARARs, i.e., the contamination concentration levels set forth as "cleanup goals" in Table 4 of the ROD.

As was true at the time the ROD was signed, there is still insufficient information to invoke any type of waiver of these statutorily required cleanup levels, pursuant to Section 121(d)(4) of CERCLA. Adequate data for an informed decision about any technical impracticability of the selected groundwater remedial action will not exist until the extraction and treatment system has become fully operational for a significant period of time.

Under Section 121 of CERCLA, 42 U.S.C. [Para] 9621, and the NCP, EPA is required to select a remedy that is protective of human health and the environment and that meets all ARARs. EPA can only select a remedy that does not meet an ARAR if it formally makes a finding based on at least one of the six factors set forth in Section 121(d)(4) of CERCLA, 42 U.S.C. [Para] 9621(d)(4). One of these six factors allows EPA to select a remedy that does not meet an ARAR if the remedy originally selected is found to be "technically impracticable from an engineering perspective" [See Section 121(c)(4)(c) of CERCLA, 42 U.S.C. [Para] 9621(d)(4)(c)]. The authority of EPA to invoke an "ARAR waiver" based on "technical impracticability" is limited under CERCLA. This waiver should be used in cases where: (i) neither existing nor innovative technologies can reliably attain the ARAR in question, or (ii) attainment of the ARAR in question would be illogical or infeasible from an engineering perspective [53 Federal Register 51439 (December 21, 1988)]. While cost may be considered in determining practicability, it should generally play a subordinate role in determining practicability from an engineering perspective [55 Federal Register 8748 (March 8, 1990)]. Accordingly, based on its reevaluation of the administrative record, EPA has determined that there is presently insufficient information upon which to waive any ARARs at the Beckman Site.

At the time EPA selected the remedial action for the Beckman Site, EPA responded to comments on the Feasibility Study (which are included in the administrative record) that objected to proposed cleanup levels which were more stringent than ARARs (MCLs or SALS). In the ROD, EPA selected ARARs as the cleanup levels for groundwater. Comments to the Feasibility Study indicated satisfaction with ARAR levels and no waiver of these ARARs was sought at that time. While the ROD acknowledged circumstances that could affect the practicability of the selected remedy, through this ESD EPA is clarifying that it will consider technical practicability or impracticability as a factor in evaluating whether, in the future, it should formally invoke a waiver of an ARAR. EPA will make such an evaluation, as required by CERCLA and the NCP, on the basis of information generated during the Remedial Action phase of the remedy.

B. Process for Future Amendments to the ROD. EPA recognizes that new information may be generated during the ongoing Remedial Design/Remedial Action process that could affect the remedy selected in the ROD. This information, which may be developed by Beckman, support
agencies, the general public, or EPA, may form the basis for a proposed amendment to the ROD or an ESD. In determining whether a change to the ROD is appropriate, EPA will consider all legally applicable requirements.

In addition, under Section 121(c) of CERCLA, 42 U.S.C. [Para] 9621(c), EPA is required to review every five years all Superfund sites where hazardous substances remain on the site to ensure that human health and the environment are protected. Therefore, it is possible that EPA may determine that a remedy selected in the ROD should be changed to provide for even greater protection to human health and the environment.

If new information is submitted by the general public, Beckman, the support agencies, or developed by EPA during implementation of the remedial action, EPA may reconsider the hazardous substance management approach selected in the ROD. If EPA determines that the ROD should be changed, it will follow all applicable requirements under CERCLA, including those of Section 117 of CERCLA, 42 U.S.C. [Para] 9617, and under the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 C.F.R. Part 300, including those required by 40 C.F.R. Subpart I, Section 300.825(c).

Daniel W. McGovern 3.6.91
Regional Administrator
RECORD OF DECISION AMENDMENT

FOR

BECKMAN INSTRUMENTS SUPERFUND SITE

PORTERVILLE, CALIFORNIA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 9
SAN FRANCISCO, CALIFORNIA

SEPTEMBER 2005
BECKMAN INSTRUMENTS ROD AMENDMENT

Beckman Instruments, Inc. Superfund Site
Porterville, Tulare County, California
EPA ID No. CAD048645444

INTRODUCTION TO THE SITE AND STATEMENT OF PURPOSE

The United States Environmental Protection Agency (EPA) is amending the groundwater remedy that was selected in the 1989 Record of Decision (ROD) for the Beckman Instruments Superfund Site (Site) located in Porterville, California.

The 1989 ROD selected extraction and treatment as the remedy for the contaminated groundwater at the Site. The original groundwater remedy has been successful in cleaning up most of the volatile organic compound (VOC) contamination at the Site; however, small, localized areas remain above the cleanup goal for 1,1-dichloroethylene (1,1-DCE). This decision document, or ROD Amendment, presents Monitored Natural Attenuation (MNA) as EPA’s selected remedy for addressing the remaining groundwater contamination at the Site.

EPA is the lead agency for response actions at this Site, and the California Department of Toxic Substances Control (DTSC) is the support agency.

This response action has been chosen in accordance with §117 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended, 42 U.S.C §9617, and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR §300.435(c)(2)(ii).

The original ROD was signed on September 26, 1989 and an Explanation of Significant Differences (ESD) was signed on March 6, 1991.

This ROD Amendment will become part of the Administrative Record, pursuant to NCP §300.825(a)(2). The Administrative Record is available for review at the following locations:

City of Porterville Library
41 West Thurman Avenue
Porterville, CA 93257
(559) 784-9458
Hours: Mon. – Thurs. 10am – 8pm

Superfund Records Center
95 Hawthorne Street
San Francisco, CA 94105
(415) 536-2000
Hours: Mon. – Fri. 8:30am – 4pm
SITE HISTORY, CONTAMINATION, AND SELECTED REMEDY

The Site, which includes the Beckman plant and surrounding study area, is located near the southern limit of the City of Porterville, California. Porterville is located in Tulare County about 25 miles southeast of Visalia on the eastern fringe of California's Central Valley. The Beckman plant is located at 167 West Poplar Avenue and occupies approximately 12 acres of a 94.33 acre parcel of land. The plant facilities consist of seven buildings used to manufacture electronic equipment, to house chemicals and supplies, to house the wastewater treatment plant, and to house maintenance equipment. The facility also contains a tank farm, drum storage area, and former waste handling areas.

The Site study area is generally bounded by the Tule River to the north, the Beckman plant property line to the east, Poplar ditch to the south and Newcomb Drive to the west (Figure 1). Land use within the study area includes residential, field crop, orchard, grazing land, Tule River floodway, commercial, industrial, and vacant land.

![Figure 1: Beckman Instruments Superfund Site Study Area](image)

At this Porterville facility Beckman\(^1\) has manufactured electronic instrument assemblies, subassemblies, and printed circuit boards since 1967. Industrial processes used at the plant have included electroplating and degreasing. Waste streams from these processes have included spent solvents, acid solutions, salts, metal-laden solutions, and plating bath sludge. Between 1967 and 1974, these waste streams were discharged to the City of Porterville sewer system. From 1974 until early 1983, waste streams were discharged to an on-site solar evaporation pond. Beginning in 1983, waste streams have been treated using wastewater facilities located on-site, thus eliminating any further discharge to the solar pond.

\(^1\) Now Beckman Coulter, Inc.
Beckman initiated groundwater-monitoring activities in late 1982 and early 1983, in conjunction with closure of the solar pond. Plant chemicals were discovered in the groundwater below the solar pond in 1983. Groundwater in the vicinity of the site area was pumped for both domestic and agricultural purposes. A survey completed in summer 1983 revealed the presence of VOC contamination in residential wells located west of the plant. After discovery of the groundwater contamination, Beckman provided alternative water supplies to approximately 300 residences located near the plant. As an additional groundwater protection measure, eight private wells which were screened in both the upper and lower aquifers were sealed or replaced to further limit the spread of contamination.

On December 2, 1983, the County of Tulare Health and Human Services Agency (HHSA), Environmental Health Services Section issued a memorandum to all District Sanitarians that imposed a moratorium on well drilling in areas downgradient of the Site. This institutional control prohibited the approval of building permits for property owners proposing to obtain water from wells in the Site area. The moratorium remains in effect.

Drilling and testing data collected during subsequent pre-Remedial Investigation (RI), RI investigations and Remedial Design/remedial Action (RD/RA) investigations indicated the existence of a multi-layer aquifer system consisting of an upper aquifer, an upper aquitard and a lower aquifer beneath and downgradient of the plant (Figure 2).

![Diagram](image)

*Figure 2: Hydrogeologic layers at the Beckman Instruments Superfund Site*
The upper aquifer is comprised of silt, sand, gravel, and cobbles. It merges with sediments of the upper aquitard at depths of approximately 50 to 75 feet below ground surface (bgs) across the Site. Groundwater occurs in the upper aquifer under unconfined conditions at historical depths ranging from approximately 7 to 42 feet bgs. Groundwater flow in this aquifer is to the west and northwest across the Site. The upper aquifer receives recharge from the Tule River, Poplar Ditch, a recharge pond, and precipitation.

The upper aquitard is comprised of a fine-grained sequence of silt, clayey silt, and sandy clay. It is a low-permeable confining unit between the upper aquifer and the lower aquifer that retards vertical movement of groundwater between the upper and lower aquifers. The top of the upper aquitard lies approximately 50 feet bgs in the vicinity of the Beckman plant. The unit ranges in thickness from approximately 20 to 60 feet. Groundwater occurs in the upper aquitard under semiconfined conditions with water levels in upper aquitard piezometers ranging from approximately 18 to 23 feet bgs. Groundwater flow within the aquitard is primarily vertical.

The lower aquifer is comprised of silty to clayey sand and gravel with interbedded silt and clay. This unit occurs below the upper aquitard with the top of the lower aquifer ranging in depth from approximately 70 to 130 feet bgs. Groundwater occurs in the lower aquifer under confined conditions with water levels in lower aquifer piezometers ranging from approximately 27 to 33 feet bgs. Groundwater flow in the lower aquifer is south-southwest near the Beckman plant and west-southwest in the remainder of the Site. The lower aquifer receives recharge from the upper aquifer in the form of vertical leakage through the upper aquitard.

The VOC contamination was originally found predominantly in the upper aquifer. Later, the VOC contamination was also found in the upper aquitard and the lower aquifer. The organic compounds identified as compounds of concern (COCs) at the Beckman site were 1,1,1-trichloroethane (1,1,1-TCA), 1,1-DCE, Freon 113, trichloroethylene (TCE), and 1,1-dichloroethane (1,1-DCA).

After the discovery of groundwater contamination in 1983, Beckman was directed by the California Department of Health Services (DHS) and the California Regional Water Quality Control Board (RWQCB) to determine the extent of the groundwater contamination. In March 1985, DHS placed the site on California's Superfund Priority Ranking List. At the request of DHS, EPA assumed the lead role in overseeing remedial studies and cleanup activities at the Site in October 1985. EPA added the site to the Federal Superfund National Priorities List as noticed in the Federal Register on June 10, 1986.

By June of 1985 Beckman had determined that COCs had migrated westward 9,000 feet downgradient of the site. After constructing numerous monitoring wells and piezometers to define the extent of the contaminant plume, Beckman constructed 20 wells in the lower aquifer and 15 containment/reclamation wells in the upper aquifer to extract groundwater for treatment. In July 1985 Beckman began cleanup activities via pumping from the upper aquifer to allow removal of COCs by air stripping to contain the western migration of the groundwater plume.

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2. The Toxic Substances Control Division of the California Department of Health Services (DHS) is the predecessor to the California Department of Toxic Substances Control (DTSC).
3. EPA proposed the Site for the NPL on October 15, 1984.
On February 20, 1987, Beckman entered into an Administrative Consent Order with EPA, Docket No. 87-02, to conduct the Remedial Investigation/Feasibility Study (RI/FS) at the Site.

A second containment and reclamation system began operations in the eastern portion of the site area in July 1987 to control the groundwater level gradients in the area of generally higher COC concentrations, and to remediate upper aquifer groundwater. The treated groundwater from the air stripping facilities was used for agricultural irrigation or was discharged to infiltration basins located near the Tule River. The water quality of the treated groundwater was regulated pursuant to RWQCB and National Pollutant Discharge Elimination System (NPDES) permit requirements. Air releases from the air stripping facilities were permitted by the Tulare County Air Pollution Control District (TCAPCD). In addition, Beckman prepared a risk assessment for the air quality impacts due to air releases which was reviewed by TCAPCD and EPA to determine that the contaminant levels released to the atmosphere were below the levels specified in EPA national policy.

EPA issued the ROD for the Site on September 26, 1989. For remedial purposes, the Site was separated into three areas: 1) Upper Aquifer, 2) Upper Aquitard and Lower Aquifer, and 3) Lead-contaminated Soils. The following remedies were selected for each area:

- **Upper Aquifer**: Continuation of the existing upper aquifer extraction, treatment, and discharge systems.
- **Upper Aquifer/Lower Aquifer**: Concurrent upper aquitard and lower aquifer extraction, treatment, and discharge. Installation of extraction wells and treatment of extracted water using existing air stripping facilities
- **Soils**: Excavation of lead-contaminated soils and offsite disposal of the excavated soils.

The cleanup goal for the groundwater was the more stringent of the State or Federal Maximum Contaminant Level (MCL) for each contaminant, and the cleanup goal for the soil was removal of all soil with lead levels above 200 ppm.

EPA issued an ESD on March 6, 1991 that amended two sentences in the ROD to clarify the following:

1. The ROD's numerical cleanup goals constitute "cleanup standards" to be attained at the completion of the remedial action.
2. EPA would review the remedial action selected in the ROD pursuant to CERCLA §121(e), 42 U.S.C. §9621(e).

Beckman has implemented the ROD under EPA oversight pursuant to Administrative Order #90-26 issued November 16, 1990, as amended March 20, 1995.
BASIS FOR THE DOCUMENT

1989 ROD Implementation

Upper Aquifer:

Analysis of groundwater samples collected during the September 1989 annual monitoring event indicated that upper aquifer COC concentrations had decreased to less than the cleanup goals established in the ROD. With approval from EPA, Beckman ceased operation of the upper aquifer containment/reclamation wellfield on January 15, 1990. COC concentrations in groundwater samples collected from upper aquifer index wells remained less than the cleanup goals for several years. Monitoring continued until 1997; all upper aquifer wells have since been abandoned. EPA has determined that the cleanup of the upper aquifer is complete.

Upper Aquitard/Lower Aquifer:

COCs were detected at concentrations exceeding cleanup goals in limited portions of the upper aquitard and lower aquifer at the site. The area requiring remediation was defined based on data collected from lower aquifer monitor wells (L-series wells) and upper aquitard piezometers completed in the shallow and deep portions of the upper aquitard (AQ-series piezometers). Interim operation of the upper aquitard/lower aquifer extraction wellfield was initiated on August 23, 1991, upon approval from the EPA. Pumping of the wellfield was initiated to control movement of COCs in upper aquitard and lower aquifer groundwater pending completion of EPA’s review of the Final Remedial Design Plan. The Final Remedial Design Plan for the upper aquitard and lower aquifer was approved by the EPA on March 13, 1992.

The interim extraction wellfield was equivalent to Phase I of the remedial design for the upper aquitard and lower aquifer. The Phase I extraction wellfield included four upper aquitard extraction wells and the four lower aquifer extraction wells. An additional lower aquifer extraction well was incorporated into the extraction wellfield on October 24, 1991.

Phase II of the remedial design was constructed during the fourth quarter of 1992. During this period, 4 new monitoring wells and 10 new extraction wells were drilled and constructed. Operation of the Phase II extraction wellfield began on January 22, 1993.

Phase III allowed for the construction and operation of one lower aquifer extraction well at each of two locations if lower aquifer groundwater COC concentrations increased to greater than cleanup goals at these locations. The 1,1-DCE concentration in lower aquifer index well L-29 increased to a concentration greater than the cleanup goal during the second quarter 1996. Lower aquifer index well L-29, located adjacent to upper aquitard extraction well AQ-2-EW, was incorporated into the extraction wellfield and began operation as a lower aquifer extraction well on July 5, 1996. The 1,1-DCE concentration in lower aquifer index well L-27 increased to a concentration greater than the cleanup goal during the third quarter 1996. Lower aquifer index well L-27, located adjacent to upper aquitard extraction well AQ-11-EW, was incorporated into the extraction wellfield and began operation as a lower aquifer extraction well on April 14, 1997.
By the summer of 1996, COC concentrations in groundwater in the majority of the area within the extraction wellfield in both the upper aquitard and lower aquifer had been reduced to concentrations less than the cleanup goal for 1,1-DCE. Wells with COC concentrations less than cleanup goals for at least one quarter of operation were deactivated based on the results of an extraction wellfield evaluation.

In March 1998, Beckman requested and received verbal approval from the EPA to conduct an extraction wellfield operations static test. At this time, 1,1-DCE concentrations in water pumped by the remaining upper aquitard and lower aquifer extraction wells appeared to have stabilized at concentrations above the cleanup goal. The stabilized concentrations were believed to be due to the limited influence of pumping on the leakage rates from low hydraulic conductivity interbeds of the upper aquitard. All active extraction wells were to be deactivated and groundwater quality sampling would be increased to determine the effect on upper aquitard and lower aquifer groundwater quality from turning off the extraction wells.

The five remaining active extraction wells were deactivated on April 13, 1998. As a result, 1,1-DCE concentrations decreased to and remained below cleanup goals in three of the extraction wells within 1 month. 1,1-DCE concentrations in L-27-EW remained on trend above the cleanup goal. 1,1-DCE concentrations in L-29-EW increased. This well was reactivated on July 29, 1998. In addition, monitor well AQ-2-LO was converted to an extraction well and activated on September 24, 1998, to assist in the remediation.

By March 1999, the 1,1-DCE concentrations had stabilized in L-29-EW and AQ-2-LO. These two wells were turned off on April 1, 1999. Concentrations of 1,1-DCE initially increased in both wells and have since then decreased. The 1,1-DCE concentrations are currently slightly above the cleanup goal of 6 ppb in well L-29-EW; well AQ-2-LO is below the goal.

The ROD selected remedy in the upper aquitard and lower aquifer was carried out from August 1991 until April 1999, when virtually all of the upper aquitard and lower aquifer was successfully remediated. Small, localized areas of the upper aquitard and lower aquifer remain above cleanup goals. Further focused operation of the pump and treat system in these areas of the upper aquitard and lower aquifer failed to show progress toward achieving cleanup goals due to the inability to accelerate contaminant removal from the upper aquitard. An EPA-approved static period of observation and monitoring followed by further focused pumping and treating, indicated that these small remaining areas were not likely to be remediated by conventional pump and treat alternatives in a reasonable timeframe and at reasonable cost.

Groundwater monitoring has continued since 1999; groundwater concentrations of 1,1-DCE have generally remained stable or decreased. Since 2001 all upper aquitard monitoring locations have remained below the 1,1-DCE cleanup goals of 6 ppb. The last monitoring event occurred in February 2005.

Soil:

The Record of Decision issued by EPA in September 1989 stated that four potential soil contamination source areas were identified and studied during the remedial investigation. Out of
130 soil samples tested for both organic and inorganic contaminants, there were six samples that contained concentrations of lead at levels considered to be a health concern. Soil samples were collected from the ‘soil stain area’ located adjacent to one of the plant buildings and at one time a blue stain could be seen in the area. Additional sampling of the soils in this area was conducted to better define the limits of the lead contaminated soils.

In 1990, in accordance with the ROD, the lead contaminated soils were excavated and disposed of off-site in a disposal facility meeting RCRA and CERCLA requirements. EPA has determined that the cleanup of the soils is complete, thus providing remediation of any health risks associated with soil borne contaminants at this site.

**EPA’s Five-Year Review**

EPA found the second Five-Year Review for the Site on September 29, 2003. EPA found that the groundwater remedy was constructed in accordance with the ROD and had functioned as designed and achieved cleanup goals for the upper aquifer but not the lower aquifer. To address the remaining low-level contamination in the lower aquifer, EPA recommended changing the remedy to Monitored Natural attenuation by amending the ROD. The Five-Year Review concluded that an engineered remedy, such as pump and treat, would not be cost-effective in cleaning up the remaining groundwater contamination at the Site.

**Current Groundwater Conditions**

Groundwater is considered the sole potential pathway of exposure to humans. Connections to municipal water sources, remedial actions, and institutional controls on well drilling have all limited the potential for human exposure to the contaminated groundwater.

Results of the February 2005 groundwater sampling event show two small, isolated areas in the lower aquifer with 1,1-DCE concentrations above the cleanup goal (Table 1). The highest concentration in the lower aquifer is 31 ppb at L-3. The other exceedances of 6.7 ppb and 8.3 ppb were detected at L-27-EW and L-29-EW, respectively. Monitoring locations in the upper aquitard remain below the cleanup goal.

**DESCRIPTION OF NEW ALTERNATIVES**

The COCs found in the lower aquifer are a result of the secondary source of COCs contained in the upper aquitard above the lower aquifer. Contaminated groundwater in the upper aquifer has leaked downward and into the upper aquitard. Although COCs have attenuated in the upper aquitard, isolated locations still provide a source of COCs to the lower aquifer. The primary constraint limiting the effectiveness of any remedial technology designed to actively reduce the concentration of contaminants is the heterogeneity within the upper aquitard and the fine-grained nature of the unit. The same physical mechanisms which retain the COCs in the upper aquitard limit the effectiveness of pump and treat alternatives (removal) and the application of additional treatment technologies in places where the COCs reside (in situ).
Remedial Technologies Investigated

To achieve a reduction in concentration in the lower aquifer, the COCs must be removed from the upper aquitard, which in effect provides the source of COCs to the lower aquifer. The following four potential remedial technologies for removing COCs from the upper aquitard were evaluated:

- Enhanced Extraction of Groundwater with Water Injection
  This alternative would use groundwater extraction in conjunction with injection of the treated water to enhance hydraulic gradients.

- Enhanced Extraction of Groundwater with Hot Water Injection
  This alternative would use groundwater extraction in conjunction with injection of hot water to enhance hydraulic gradients and to increase the solubility of COCs.

- Thermally Enhanced Recovery using Steam Injection
  This alternative would use steam injection to enhance removal of residual COCs by groundwater extraction and soil vapor extraction.

- In Situ Destruction of 1,1-DCE through Hydrous Pyrolysis/Oxidation
  This alternative would use pyrolysis/oxidation to destroy the residual COCs in situ.

The screening process consisted of evaluating each remedial alternative in terms of its effectiveness, implementability, and relative cost as prescribed in EPA’s guidance for conducting feasibility studies under CERCLA. The evaluation of the four potential remedial technologies indicated that in each case there was a high degree of uncertainty with regard to effectiveness of removal of COCs from the aquitard with the proposed technology. Therefore, none of these potential remedial technologies were carried forward to the final remedial alternatives analysis and evaluations. Further details on the evaluation of the remedial technologies can be found in “Monitored Natural Attenuation Plan: Beckman Instruments, Inc. Site” (Hargis + Associates, Inc, June 30, 2005).4

Remedial Alternatives Evaluated

Three remaining remedial alternatives were considered for a focused alternatives analysis and evaluations. The three alternatives include no further action, resumption of the ROD remedy (extraction and treatment) at selected locations, and monitored natural attenuation. A summary of each alternative is shown below:

Alternative No. 1 – No Further Action

CERCLA requires evaluation of the “no action” alternative as a baseline to allow comparison of alternatives. Under the no action alternative, no remedial action would be

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4 This document, which is included in the Administrative Record, served in lieu of a focused feasibility study.
implemented to pump and treat groundwater, no containment would be implemented, and no monitoring of groundwater conditions would take place. Continued reduction in chemical concentrations and some reduction of volume, toxicity and mobility as a result of an unmonitored natural attenuation would likely take place. Risk would also likely be reduced with time but it would be unquantified because no data would be collected.

The remedial action objectives would not be met under the "no action" alternative due to the fact that chemical concentrations in the isolated areas would not be monitored to assure that contamination was not migrating to unaffected areas. Groundwater would not be monitored and this would increase the potential for the public to be inadvertently exposed to contaminated groundwater. This alternative is therefore not protective of human health and the environment. Therefore, the no action alternative is not considered a potential remedy for the site and is not evaluated further.

Alternative No. 2 – Resumption of Extraction and Treatment

The extraction and treatment alternative would require a resumption of the groundwater pumping from the lower aquifer and treatment of the extracted water by air stripping. Capital costs include the construction of additional pipelines and a new 150 gpm treatment tower. The treated groundwater from the air stripping facilities would be used for agricultural irrigation or discharged to infiltration basins located near the Tule River as before. Routine monitoring of the groundwater before and after treatment would be conducted to assess operational conditions and ensure cleanup goals are met.

This alternative achieves protection of human health by keeping current institutional controls in place that minimize the potential for human exposure to groundwater exceeding EPA’s cleanup goals. As part of the annual reporting process, Beckman will contact Tulare County HHSA to confirm that the institutional controls against well drilling in the Site area are still in effect and will note the status of the controls in the annual report.

Alternative No. 3 – Monitored Natural Attenuation

Newly installed wells, in addition to existing monitoring wells, will be sampled to monitor the progress of the decreases in contaminant concentrations. The effectiveness of the MNA remedy will be periodically evaluated in accordance with EPA’s MNA guidance. This alternative achieves protection of human health by keeping current institutional controls in place that minimize the potential for human exposure to groundwater exceeding EPA’s cleanup goals. As part of the annual MNA reporting process, Beckman will contact Tulare County HHSA to confirm that the institutional controls against well drilling in the Site area are still in effect and will note the status of the controls in the annual report.

MNA protects groundwater resources by carefully monitoring the concentrations of COCs to ensure containment and reduction in concentrations over time due to natural attenuation processes. The primary natural attenuation processes that are occurring at the
Site are lateral and downgradient dispersion, dilution via the flow of clean water from the upper aquifer and upper aquitard into the lower aquifer, and additional dilution by upgradient recharge of the lower aquifer.

The monitoring program will require periodic evaluation of the effectiveness of the MNA remedy at the site. The monitoring and evaluation is relatively straightforward, given that only two relatively small isolated areas of recalcitrant 1,1-DCE concentrations remain above the cleanup goal. The 1,1-DCE cleanup goal is the primary remaining remedial action objective. The groundwater monitoring program will allow regular and routine comparison of the concentrations of 1,1-DCE to the cleanup goal of 6μg/l.

EVALUATION OF ALTERNATIVES

EPA evaluated the three potential remedial action alternatives against the nine criteria designed to measure the effectiveness and acceptability of each alternative.

To be considered a viable remedy for a hazardous waste problem, a remedial alternative must first meet EPA's two basic or "threshold" criteria. These criteria require that the remedy 1) protect human health and the environment and 2) comply with laws and requirements of other government agencies with regulatory authority over the site. These authorities are collectively known as "applicable, relevant and appropriate requirements" or ARARs. Of the three alternatives discussed in the Proposed Plan, only two meet the threshold criteria, Extraction and Treatment and Monitored Natural Attenuation. In addition to the two threshold criteria, there are seven other criteria that EPA must consider when evaluating a proposed remedy.

The following table summarizes EPA’s evaluation of the alternatives against the nine criteria. As a result of this evaluation, EPA prefers Alternative No. 3 – Monitored Natural Attenuation. Based upon information currently available, EPA believes Alternative No. 3 meets the threshold criteria and provides the best balance among the alternatives evaluated.

<table>
<thead>
<tr>
<th>CRITERIA</th>
<th>ALT. No. 1 – NO ACTION</th>
<th>ALT. No. 2 – Extraction &amp; Treatment</th>
<th>ALT. No. 3 – Monitored Natural Attenuation</th>
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<tr>
<td>Protectiveness</td>
<td>No</td>
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<tr>
<td>Compliance with ARARs</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Long-term Effectiveness</td>
<td>No data would be collected to determine effectiveness</td>
<td>Effective and permanent</td>
<td>Effective and permanent</td>
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Beckman Instruments ROD Amendment (9/05)
<table>
<thead>
<tr>
<th>Reduction in toxicity, mobility, or volume</th>
<th>No data would be collected to determine reduction</th>
<th>Reduction will occur in less than 15 years</th>
<th>Reduction will occur in less than 15 years</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Short-term Effectiveness</strong></td>
<td>No data would be collected to determine effectiveness</td>
<td>Effective in the short term</td>
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<tr>
<td><strong>Implementability</strong></td>
<td>No implementability issues</td>
<td>Additional capital improvements needed to implement</td>
<td>Straightforward to implement</td>
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<tr>
<td><strong>Capital Costs</strong></td>
<td>$ 0</td>
<td>$ 631,000</td>
<td>$ 94,000</td>
</tr>
<tr>
<td><strong>Annual O&amp;M Costs</strong></td>
<td>$ 0</td>
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<tr>
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EPA’s Selected Alternative:
Alternative No. 3- Monitored Natural Attenuation, with Existing Institutional Controls

EPA is changing the cleanup strategy for the Site because the sole remaining COC above the cleanup standard, 1,1-DCE, has been successfully remediated in all but a few isolated areas in the upper aquitard and lower aquifer. The current information on the migration of impacted groundwater and the generally declining concentrations of 1,1-DCE, warrant reevaluation of the original remedy of groundwater extraction and treatment. After evaluation of the three cleanup alternatives to address the residual groundwater contamination at the Site, EPA selects Alternative No. 3 - Monitored Natural Attenuation (MNA) as the remedy that provides the optimum balance among EPA’s nine evaluation criteria. Alternative No. 3 involves natural reduction of groundwater contaminant concentrations in the upper aquitard and lower aquifer in those few remaining areas where concentrations above the cleanup standard still exist. Naturally occurring physical and chemical processes such as dilution, dispersion and/or adsorption are already occurring and will continue to do so. EPA will closely monitor the groundwater to ensure that the reduction in chemical concentrations in groundwater continues to occur. In addition, EPA will require annual verification that the existing institutional controls against well drilling in the study area are still in effect. Tulare County HHSA has continued to implement the 1983...
moratorium on building permits, loan certifications, or authorities to construct for property owners who propose to obtain water from wells in the Site area.5

Remedial Action Objectives

The original ROD stated that "...the basic cleanup objective is to cho[o]se a remedy that is protective of public health and the environment, that is cost effective, and utilizes permanent solutions and alternative treatment technologies to the maximum extent practicable."6

EPA’s objectives for the actions considered in cleanup of groundwater include:

1. Protect human health and the environment by continuing to eliminate exposure to contaminated groundwater; and

2. Reduce contamination in groundwater to concentrations that meet cleanup goals and return groundwater to beneficial use.

At this site, EPA is selecting Monitored Natural Attenuation (MNA) as the remedy to achieve these goals for the remaining portion of the site requiring groundwater cleanup. The long term outcome with this remedy is consistent with these stated objectives and is no less effective than other proposed methods. The specific intent of this amended ROD is to select a remedy that will reduce concentrations of 1,1-DCE in the isolated remaining areas of the lower aquifer to below the State MCL of 6 ppb. This cleanup level remains unchanged from the original ROD.

Institutional Controls

Since 1983 the County of Tulare has imposed a moratorium on well drilling in all areas downgradient of the Site. This institutional control prohibits the approval of well permits in the Site area. The 1989 ROD did not specifically select as part of the remedy the institutional control that was already in place. This ROD Amendment, in addition to selecting Monitored Natural Attenuation as the remedy, incorporates this institutional control. Therefore, this institutional control is part of the selected remedy.

Applicable Relevant and Appropriate Requirements

The 2003 Five-Year Review determined that the exposure assumptions, toxicity data, cleanup levels, and RAOs are still valid and that there are no changes in the ARARs associated with this Site. A review of current ARARs from other similar sites in California was conducted. Due primarily to the sole remaining COC being 1,1-DCE above the current CMCL, which is unchanged from 1989, none of the more current ARARs were judged to have any additional impact on site activities under an MNA approach.

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5 The City of Porterville is in the process of annexing unincorporated areas of Tulare County, including the Site area. Restrictions on the installation of wells in the Site area will remain in effect through the appropriate County and City authorities.

6 1989 ROD, page 16
SUPPORT AGENCY COMMENTS

DTSC concurred with the Monitored Natural Attenuation (MNA) remedy selected in this ROD Amendment in a letter dated August 25, 2005. The California Regional Water Quality Control Board (RWQCB) has also provided concurrence in a letter dated August 15, 2005.

STATUTORY DETERMINATIONS

The modified remedy in this ROD Amendment satisfies CERCLA §121, including the following statutory requirements of CERCLA §121(b): 1) be protective of human health and the environment; 2) comply with ARARs; 3) be cost-effective; and 4) utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. Although the modified remedy does not satisfy the preference for treatment as a principle element, the original remedy of groundwater extraction and treatment has reduced the contamination at the Site to a level where treatment is not cost effective.

PUBLIC PARTICIPATION COMPLIANCE

The public participation requirements set out in NCP §300.435(c)(2)(ii) have been met. The Proposed Plan was issued on August 1, 2005 and provided for a 30-day public comment period that ended on August 30, 2005. A public meeting was held on August 9, 2005 at the Porterville Public Library located at 41 West Thurman Avenue in Porterville, California. A full transcript of the meeting can be found in the Site’s Administrative Record file. The Administrative Record file, including reports, fact sheets and related documents, is available for public review at the Superfund Records Center at Region IX offices in San Francisco and in the reference section of the Porterville Public Library located at 41 West Thurman Avenue. In addition, the Proposed Plan was mailed to all persons contained on the Beckman Instruments Site mailing list, which includes members of the general public, local elected officials, Beckman Instruments employees, and other parties expressing an interest in the proceedings. A public notice of the availability of the Proposed Plan and public meeting was published in the Porterville Recorder on July 25, 2005.

Responsiveness Summary

The attached Responsiveness Summary presents EPA’s responses to comments received on the Proposed Plan at the public meeting and during the 30-day public comment period.

AUTHORIZING SIGNATURE

[Signature]
Elizabeth J. Adams, Chief
Site Cleanup Branch
Superfund Division
U.S. EPA Region 9

[Signature]
Date September 27, 2005

Beckman Instruments ROD Amendment (9/05)
RESPONSIVENESS SUMMARY

This Responsiveness Summary presents EPA's responses to the written and selected oral comments received at the public meeting and during the public comment period. The volume of community comments on the Beckman Proposed Plan was extremely light. The only comment letter received indicated support of the MNA alternative for the Beckman Site. The comment letter can be found in the Administrative Record file. During the public meeting, several questions about the Site were raised by members of the community, but no adverse comments were received. A full transcript of the meeting can be found in the Administrative Record file.

Summary of Public Meeting Questions

Are there any private drinking water wells in the affected area?

EPA Response: No, there are no active private drinking water wells in the affected area. After the groundwater contamination was discovered, all private drinking water wells were shut down. Residents received bottled water until the connections to the City of Porterville water supply system were completed. Some agricultural wells were replaced and those wells are still used for irrigation and groundwater monitoring purposes.

What is the water source for City of Porterville Well 13?

EPA Response: City Well 13 is located in the affected area near the Beckman facility. Although no contamination was detected in Well 13, the well was shut down after the groundwater contamination was discovered. The well is screened between 150 feet bgs and 700 feet bgs. In recent years, the City has used Well 13 for water supply during the summer months. No contamination has ever been detected in the water extracted by Well 13, and the water meets all drinking water standards. The City's water supply system consists of 26 wells and water from all the wells is commingled in the distribution system.

Who pays for the costs of implementing the selected alternative?

EPA Response: Beckman-Coulter, Inc. pays for all costs associated with the selected alternative as the Site's sole potentially responsible party (PRP).

Who conducts the monitoring for the MNA remedy?

EPA Response: The monitoring is conducted by consultants hired by Beckman-Coulter, Inc. under an EPA-approved Sampling and Analysis Plan (SAP) and Quality Assurance Project Plan (QAPP). All groundwater samples must be analyzed by an EPA-certified lab.

Are there any restrictions on property development in the affected area?

EPA Response: The only restriction that EPA is aware of is the Tulare County restriction on the installation of wells in the affected area.
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<th>WELL</th>
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<th>1,1-DCE</th>
<th>FREON 113</th>
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Five-Year Review Report

Beckman Instruments Site
Porterville, California

April 3, 1998

U.S. Environmental Protection Agency
Region IX, San Francisco
Superfund Division
I. INTRODUCTION

1. Purpose

EPA Region 9 conducted this review pursuant to CERCLA section 121(c), NCP section 300.400(f)(4)(ii), and OSWER Directives 9355.7-02 (May 23, 1991), and 9355.7-02A (July 26, 1994). It is a policy review. The purpose of a five-year review is to ensure that a remedial action remains protective of public health and the environment and is functioning as designed. This review included a survey of the RI/FS, the ROD, the Site Close Out Report, and discussions with the Beckman Instruments Project Manager and the DTSC Project Manager.

Because the response action at the Beckman site is a long-term remedial action (LTRA), an ongoing action which has not yet achieved the cleanup standards set in the ROD, the purpose of this review is two-fold. The first goal is to confirm that the remedy selected and implemented remains effective at protecting human health and the environment. This includes ensuring that the groundwater remedy, which is an extraction and treatment system, is operating and functioning as designed, and the soil remedy, which was excavation, remains protective. The second goal is to evaluate whether the original cleanup objectives remain protective of human health and the environment.

2. Summary of Review Results

The results of the five year review of the remedial action at the Beckman Instruments site are that: (1) the soil excavation successfully removed soils contaminated with lead; (2) the groundwater extraction and treatment system is operating and functioning as designed; (3) the VOC plume is still controlled; (4) the original cleanup objectives remain protective of human health and the environment; and (5) there are no new ARAR’s which would make the remedial action insufficient.

3. Site Description and History

The Beckman Instruments Superfund site is located near the southern limit of the City of Porterville in Tulare County, approximately 25 miles southeast of Visalia on the eastern edge of California’s Central Valley. The site study area is several square miles and consists of Beckman property and farm/residential property to the west of the site. Beckman has manufactured electronic equipment assemblies, subassemblies, and printed circuit boards in Porterville since 1967.
Industrial processes used at the plant include electroplating and degreasing. The waste streams from these processes have included spent halogenated solvents, inorganic and acid solutions, salts, metal-laden solutions, and plating bath sludges. Between 1967 and 1974 wastewater was discharged to the City of Porterville sewer system. From 1975 until early 1983 various waste streams were discharged to an on-site solar evaporation pond. From 1983 to present, waste streams have been treated on-site. Solid wastes are transported to appropriate disposal facilities. Treated liquids are discharged to the City of Porterville sewer system.

Liquid was detected in the evaporation pond’s leak detection sump intermittently beginning in 1978. In response to enforcement actions taken by the Regional Water Quality Control Board, Central Valley Region (the Board) and the California Department of Health Services (DHS, now DTSC), Beckman initiated groundwater monitoring in the vicinity of the pond in late 1982 in conjunction with closure of the pond. Discharges to the pond were terminated in January 1983. This solar pond is considered the main source of widespread groundwater contamination in the upper aquifer and limited contamination of the upper aquitard and lower aquifer. Wastes may have also been placed in other areas near the plant.

DHS placed the site on California’s Superfund State Priority Ranking List. At DHS’s request, EPA assumed the lead role on overseeing remedial studies and cleanup activities at the site in October 1985. Also in 1985, under the direction of the Board, Beckman commenced operation of a groundwater pump and treat system to contain the migration of VOCs in the upper aquifer. On June 10, 1986, EPA placed the site on the National Priorities List (NPL).

II. REMEDIAL ACTION OBJECTIVES

1. Description of the Selected Remedies

EPA issued a ROD on September 26, 1989 specifying the following remedies:

- Extraction and treatment by air stripping for contaminated groundwater in the upper aquifer, upper aquitard, and lower aquifer. Treated water would be disposed of into infiltration basins to recharge groundwater, or could be used for irrigation; and

- Excavation and off-site disposal for soils contaminated with lead above 200 ppm.

Federal MCLs are designated as the cleanup standards for the groundwater. For those chemicals that have a more stringent state MCL, EPA has selected the state MCL, (specifically 1,1-DCE). For those chemicals that do not have an established state or federal MCL (Freon 113), the state action level (SAL) is designated as the cleanup standard. The selection of MCLs as cleanup goals is consistent with the National Contingency Plan and EPA policy.
The closed evaporation pond is considered to have been the main source of contamination. However, due to the migration of contaminants down to the upper aquitard underlying the site, the upper aquitard is now recognized to be a secondary residual source of contaminants in the study area. In the vicinity of the Beckman plant the aquitard is hydraulically connected to the lower aquifer. The lower aquifer has wells for human consumption and irrigation. The remedial objective continues to be to restore the aquitard to MCLs and to prevent further migration into the lower aquifer. The ROD recognizes that cleanup goals might not be achieved in the aquitard and that some combination of institutional controls might eventually be needed.

The cleanup standard established in the ROD for soils contaminated with lead is 200 mg/kg and is based on risk through direct contact and dust inhalation. This lead level continues to be protective (EPA's Region 9 PRG for lead is 400 mg/kg). By excavating and disposing of the contaminated the soil, the objective of reducing the risk to human health and the environment has been met.

2. Implementation of the Selected Remedies

As of January 1990 Beckman attained ROD cleanup levels in the upper aquifer and ceased operating the upper aquifer containment/reclamation system. Beckman completed removal and off-site disposal of lead-containing soils in March 1990.

Beckman began operation of the Phase I wells in August 1991. EPA conducted an inspection of the extraction and treatment system on September 10, 1992. The Phase II wells began operating in January 1993. The following wells have been installed at the site:

**Upper Aquifer:** 70 monitoring wells, 90 piezometers, 10 partially penetrating monitor wells, 15 extraction wells, 4 cluster wells

**Upper Aquitard:** 36 piezometers, 10 extraction wells, 4 observation wells

**Lower Aquifer:** 31 monitoring wells, 10 extractions wells

The pre-final inspection was conducted at the site in June 1993 with representatives from EPA, DTSC and Beckman.

III. ARARS REVIEW

There are no new federal ARARs that would apply to the Beckman remedial action. Neither the federal nor state MCLs for the contaminants identified in the ROD have changed. The DTSC project manager for the site was contacted to determine if any new state ARARs have been promulgated since the ROD which would render the remedial action inadequate. He
determined that there are no new ARARs that would affect the remedy at the site.

IV. SUMMARY OF SITE VISIT

A site visit was conducted by both the EPA and DTSC project managers on August 7, 1997. The visit consisted of a walking inspection of the Beckman property which includes the closed evaporation pond, the excavated soil area, the groundwater treatment system and air stripping tower, and infiltration basins. The visit also included an inspection of the currently active extraction system wells and a drive-by to survey the area where the upper aquifer plume historically extended.

The site was found to be in excellent condition. All the components of the treatment system are properly functioning and the system is capable of continuous, automated operation. Treatment system laboratory results indicate that the system is performing properly. Interpretation of the resulting analytical data indicates that the groundwater extraction and treatment system is effective and is meeting the performance levels established in the ROD.

Operation and maintenance (O&M) activities are acceptable and have not increased more than was anticipated at the time of remedy selection.

V. CURRENT REMEDIAL ACTIVITIES

Due to the success of the remedial action, the upper aquifer reached ROD cleanup goals in January 1990, at which time all upper aquifer extraction wells in both the eastern and western well fields were turned off. Quarterly monitoring continued from 1990 to 1993. From 1993 to 1997 the well fields were monitored every 15 months. In that period of time no wells had levels of contamination above cleanup goals. The upper aquifer is considered clean and no further monitoring is planned.

Due to the success of the remedial action, many of the wells that were installed in the early 1990’s are no longer used The currently operating groundwater system includes the following wells:

**Upper Aquitard:** 18 piezometers, 2 extraction wells, 4 monitoring wells

**Lower Aquifer:** 13 monitoring wells, 3 extractions wells

The upper aquitard and lower aquifer still have low levels of contamination, with 1,1-DCE the only contaminant above cleanup goals. Recent sampling shows that 4 upper aquitard wells and 5 lower aquifer wells have 1,1-DCE above cleanup goals.
The distribution of 1,1-DCE in the upper aquitard groundwater is controlled by the location of the area relative to the former source at the site. The area closest to the source was exposed longer to higher concentrations of contaminants that migrated downward from the upper aquifer. At this location the upper aquitard is comprised of interbedded silts, clays, and fine sands. Beckman now believes that remediation of the upper aquifer and lower aquitard to below cleanup goals for 1,1-DCE might not be feasible due to the continued migration of contaminants from the fine-grained sediments in the upper aquitard.

VI. AREAS OF NONCOMPLIANCE

There were no areas or conditions of noncompliance with the goals of the remedial action at the site.

VII. RECOMMENDATIONS

On March 30, 1998, EPA received a proposal from Beckman to perform a test of the upper aquitard/lower aquifer extraction wells. EPA and Beckman believe this test is necessary to determine the effectiveness of continuing to use the current extraction and treatment system to reach cleanup goals. The concentrations of the contaminants of concern have been reduced significantly since 1985. For the past three years the only contaminant that has been detected above cleanup goals is 1,1-DCE. Current levels range from 18 ppb to 30 ppb. While these levels are above the state MCL of 6 ppb, the extent of the plume is not increasing and it is not threatening any nearby drinking water wells.

As a test of the upper aquitard/lower aquifer extraction well field, Beckman is proposing to turn off the extraction wells for an extended period of time and to continue monitoring the groundwater. At the end of 6 months the data will be evaluated to determine if the test should be extended and if other long-term remedial options should be considered. The EPA project manager and EPA hydrogeologist intend to approve Beckman’s proposal.

VIII. STATEMENT OF PROTECTIVENESS

I certify that the remedies selected for this site remain protective of human health and the environment.

IX. NEXT REVIEW

Groundwater at the site remains above cleanup goals for 1,1-DCE. It is EPA’s policy to
conduct five-year reviews at long-term remedial action sites, so the next five-year review will be conducted five years from the date of this review.

Keith A. Takata, Director  
Superfund Division, U.S. EPA, Region 9

4-3-98  
Date
Five-Year Review Report

Second Five-Year Review Report
for
Beckman Instruments Superfund Site
Porterville, California

Prepared by
United States Environmental Protection Agency
Region 9
San Francisco, California

Approved by:  Date:

[Signature]
Elizabeth Adams
Acting Chief, Site Cleanup Branch
Superfund Division

SEPTEMBER 29, 2003
# Five-Year Review Summary Form

## Site Identification
- **Site name (from WasteLAN):** Beckman Instruments
- **EPA ID (from WasteLAN):** CADO48645444
- **Region:** 9  
  **State:** CA  
  **City/County:** Porterville/ Tulare

## Site Status
- **NPL status:** Final  
  Deleted  
  Other (specify):__
- **Remediation status (choose all that apply):** Under Construction  
  Operating  
  Complete
- **Multiple OUs?** YES  NO
- **Construction completion date:** ___ / ___ / ______
- **Has site been put into reuse?** YES  NO

## Review Status
- **Lead agency:** EPA  
  State  
  Tribe  
  Other Federal Agency
- **Author name:** Holly Hadlock
- **Author title:** RPM
- **Author affiliation:**
- **Review period:** (6/1/2003 to 9/1/2003)
- **Date(s) of site inspection:** 7/19/2003

## Type of review:
<table>
<thead>
<tr>
<th>Post-SARA</th>
<th>Pre-SARA</th>
<th>NPL-Removal only</th>
<th>Non-NPL Remedial Action Site</th>
<th>NPL State/Tribe-lead</th>
<th>Regional Discretion</th>
</tr>
</thead>
</table>

- **Review number:** 1 (first) 2 (second) 3 (third)  
  Other (specify): __________

## Triggering action:
- Actual RA Onsite Construction at OU #___
- Actual RA Start at OU #___
- Construction Completion
- (Previous Five-Year Review Report:)
  Other (specify): __________

## Triggering action date (from WasteLAN): 4/13/1993

## Due date (five years after triggering action date): ___ / ___ / ______

---

* "OU" refers to operable unit.
** [Review period should correspond to the actual start and end dates of the Five-Year Review in WasteLAN.]
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<td>Attachment 2 - Site Map .......................................................................</td>
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<td>Attachment 3 - List of Documents Reviewed ............................................</td>
</tr>
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</table>
**List of Acronyms and Abbreviations**

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARARs</td>
<td>Applicable or Relevant and Appropriate Requirements</td>
</tr>
<tr>
<td>bgs</td>
<td>below ground surface</td>
</tr>
<tr>
<td>CERCLA</td>
<td>Comprehensive Environmental Response, Compensation, and Liability Act</td>
</tr>
<tr>
<td>DTSC</td>
<td>Department of Toxic Substances Control</td>
</tr>
<tr>
<td>EPA</td>
<td>Environmental Protection Agency</td>
</tr>
<tr>
<td>MNA</td>
<td>monitored natural attenuation</td>
</tr>
<tr>
<td>MCL</td>
<td>maximum contaminant level</td>
</tr>
<tr>
<td>NCP</td>
<td>National Contingency Plan</td>
</tr>
<tr>
<td>NPL</td>
<td>National Priorities List</td>
</tr>
<tr>
<td>ppb</td>
<td>parts per billion</td>
</tr>
<tr>
<td>RA</td>
<td>remedial action</td>
</tr>
<tr>
<td>RAOs</td>
<td>remedial action objectives</td>
</tr>
<tr>
<td>RI</td>
<td>remedial investigation</td>
</tr>
<tr>
<td>ROD</td>
<td>Record of Decision</td>
</tr>
<tr>
<td>RPM</td>
<td>Remedial Project Manager</td>
</tr>
<tr>
<td>RWQCB</td>
<td>Regional Water Quality Control Board</td>
</tr>
<tr>
<td>VOCs</td>
<td>volatile organic compounds</td>
</tr>
</tbody>
</table>
**Executive Summary**

The remedy for the Beckman Instruments Superfund Site ("the site") in Porterville, California, included groundwater extraction and treatment, and excavation and off-site disposal of soils contaminated with lead above 200 ppm. The trigger for this five-year review was the first five-year review conducted in 1998.

The assessment of this five-year review found that the remedy was constructed in accordance with the requirements of the Record of Decision (ROD), dated September 26, 1989. The remedy functioned as designed and achieved ROD cleanup goals for the upper aquifer. The groundwater pump and treat system was unable to reach cleanup goals in the lower aquifer. However, immediate threats have been addressed because this water is not used for drinking water. This five-year review recommends a ROD amendment be prepared for the lower aquifer to ensure long-term protectiveness.
Beckman Instruments Superfund Site
Porterville, California
Second Five-Year Review Report

1. Introduction

The purpose of a five-year review is to determine whether the remedy at a site is protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in five-year review reports. In addition, five-year review reports identify issues found during the review and identify recommendations to address them.

The Agency is preparing this Five-Year Review Report for the Beckman Instruments Site in Porterville, California, as a matter of EPA policy, because it is taking more than five years to achieve cleanup levels in the groundwater.

In 1998, the United States Environmental Protection Agency (EPA), Region 9, conducted the first five-year review of the remedy implemented at the site in Porterville, California. This first five-year review determined that the remedy at the site was protective of human health and the environment.

The Remedial Project Manager (RPM) conducted this second five-year review from June 2003 through September 2003 for the entire site. This report documents the results of the review.

2. Site Chronology

Table 1 - Chronology of Site Events, Beckman Instruments Site

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial wastes disposed on-site</td>
<td>1967 - 1983</td>
</tr>
<tr>
<td>Leak detected in on-site evaporation pond</td>
<td>1978</td>
</tr>
<tr>
<td>CA RWQCB issued order to investigate groundwater contamination</td>
<td>1982</td>
</tr>
<tr>
<td>Discharge to waste pond discontinued</td>
<td>1983</td>
</tr>
<tr>
<td>Beckman begins operation of groundwater pump and treat system</td>
<td>July 1985</td>
</tr>
<tr>
<td>Final listing on NPL</td>
<td>June 10, 1986</td>
</tr>
<tr>
<td>Beckman installs 2nd pump and treat system in eastern portion of site</td>
<td>July 1987</td>
</tr>
<tr>
<td>ROD selecting the final remedy is signed</td>
<td>Sept. 26, 1989</td>
</tr>
<tr>
<td>Contaminated soil excavated and disposed off-site</td>
<td>1990</td>
</tr>
<tr>
<td>Cleanup levels reached in upper aquifer</td>
<td>1990</td>
</tr>
<tr>
<td>Additional extraction wells added to upper aquitard and lower aquifer</td>
<td>1992-1993</td>
</tr>
<tr>
<td>Event</td>
<td>Date</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>First five-year review</td>
<td>1998</td>
</tr>
<tr>
<td>Pump test of upper aquitard/lower aquifer extraction wells</td>
<td>1998</td>
</tr>
<tr>
<td>EPA approves Beckman proposal to change remedy to monitored</td>
<td>2001</td>
</tr>
<tr>
<td>natural attenuation</td>
<td></td>
</tr>
</tbody>
</table>

3. **Background**

**Physical Characteristics**

The Beckman Instruments site (the site) is located near the southern limit of the City of Porterville in south-central Tulare County approximately halfway between Los Angeles and San Francisco. Porterville lies on the eastern side of the southern half of the San Joaquin Valley, about 25 miles southeast of Visalia (see Attachment 1, Site Location Map). The Site is several square miles in area and consists of the Beckman plant property and other privately owned commercial, agricultural, and residential property located to the west of the Beckman plant.

The Beckman plant is located at 167 West Poplar Avenue and occupies approximately 12 acres. The Site is generally bounded by the Tule River to the north, plant property to the east, Poplar ditch to the south, and Newcomb Drive on the west (see Attachment 2, Site Plan).

The City of Porterville is situated on a broad alluvial fan of the Tule River. Much of this fan forms a relatively flat alluvial plain, characterized by surfaces of low topographic relief which rarely exceed 10 feet of elevation change, except in the vicinity of the river.

The site aquifer system consists of an upper aquifer, upper aquitard, and lower aquifer. These units are the uppermost portions of a westward thickening wedge of sediments of continental origin.

The upper aquifer is comprised of silt, sand, gravel, and cobbles. These sediments merge with the sediments of the upper aquitard a depths of approximately 50 to 75 feet below ground surface (bgs) across the site. Groundwater occurs in the upper aquifer under unconfined conditions. Historical depth to water has ranged from approximately 7 to 42 feet bgs. Groundwater flow in this aquifer is to the west and northwest across the site.

The upper aquitard is comprised of a fine-grained sequence of silt, clayey silt, and sandy clay. The upper aquitard is a low-permeable confining unit between the upper aquifer and the lower aquifer. The top of the upper aquitard occurs approximately 50 feet bgs in the vicinity of the Beckman plant and is approximately 46 to 51 feet thick in that location.

The lower aquifer occurs below the upper aquitard throughout the site. The top of this unit ranges in depth from approximately 80 to 130 feet below ground surface. The lower aquifer is comprised of silty to clayey sand and gravel with interbedded silt and clay. Generally, the lower aquifer materials contain a greater percentage of fine-grained sediments and interbeds...
than the upper aquifer. The lower aquifer is estimated to extend to a depth of approximately 180 to 220 feet bgs throughout the site.

Land and Resource Use

Land use in the Beckman area includes residences, field crops, orchards, grazing land, commercial/industrial, and vacant land.

Beckman Instruments, now known as Beckman Coulter, Inc., has manufactured electronic equipment assemblies and printed circuit boards in Porterville since 1967. The Beckman plant consists of 7 buildings used to manufacture and repair electronic equipment, house chemicals and supplies, house the wastewater treatment plant, and house maintenance equipment. The facility also contains a tank farm, drum storage area, and former waste handling areas.

History of Contamination

Industrial processes at the Beckman plant have included electroplating and degreasing. Hazardous wastes are generated during the manufacturing of the printed circuit boards, primarily as rinse water. Waste streams from these processes included spent halogenated solvents, inorganic and acid solutions, salts, metal-laden solutions, and plating bath sludges.

Between 1967 and 1974 wastewater was discharged to the City of Porterville sewer system. From 1974 to 1983 waste streams were discharged to an on-site solar evaporation pond. Since 1983, waste streams have been treated on-site and halogenated solvents are no longer used. The current on-site waste treatment system extracts heavy metals from an aqueous solution and makes a filter cake which is sent out for recycling.

Initial Response

Beckman initiated groundwater monitoring in the vicinity of the solar pond in 1982. Plant chemicals were first discovered in groundwater below the solar pond and in domestic wells downgradient of the plant in 1983. The solar pond was closed upon the discovery of the leakage. Prior to discovery of chemicals in the groundwater in 1983, groundwater below the site was used for domestic and agricultural purposes. After discovery of the chemicals, Beckman provided alternative water supplies to approximately 300 residences in the study area. As an additional groundwater protection measure, 8 private wells which were screened in both the upper and lower aquifers were sealed off in order to prevent possible migration of contaminated groundwater from the upper aquifer to the lower aquifer through the wells.

With the discovery of contamination in the groundwater, Beckman was directed by CA DHS and the RWQCB to determine the extent of groundwater contamination. By June of 1985, VOCs had migrated westward 9,000 feet downgradient of the site.

Beckman began pumping and treating groundwater with air stripping in July 1985 to contain western migration of the plume, control water level gradients in the upper aquifer, and reclaim upper aquifer groundwater. A second containment and reclamation system began pumping in the eastern portion of the site area in July 1987. Between 1983 and December 1988
Beckman installed 11 extraction wells in the upper aquifer and 15 extraction wells in the lower aquifer.

**Basis for Taking Remedial Action**

Hazardous substances that have been released at the site in each media include:

**Groundwater:** The primary contaminants found in the groundwater were volatile organic compounds (VOCs). The highest contaminant concentrations detected in the groundwater during sampling in 1988 and 1989 are shown in Table 1 below.

<table>
<thead>
<tr>
<th>Contaminant</th>
<th>Upper Aquifer</th>
<th>Upper Aquitard</th>
<th>Lower Aquifer</th>
<th>MCL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,1,1-TCA</td>
<td>18.0</td>
<td>270.0</td>
<td>44.0</td>
<td>200 (EPA &amp; DHS)</td>
</tr>
<tr>
<td>1,1-DCE</td>
<td>11.0</td>
<td>460.0</td>
<td>80.0</td>
<td>6.0 (DHS)</td>
</tr>
<tr>
<td>Freon 113</td>
<td>16.0</td>
<td>310.0</td>
<td>16.0</td>
<td>1200 (DHS)</td>
</tr>
<tr>
<td>1,1-DCA</td>
<td>2.1</td>
<td>3.8</td>
<td>6.1</td>
<td>5.0 (DHS)</td>
</tr>
<tr>
<td>TCE</td>
<td>0.5</td>
<td>18.0</td>
<td>26.0</td>
<td>5.0 (EPA &amp; DHS)</td>
</tr>
</tbody>
</table>

**Soil:** Lead was the only contaminant in soil at a concentration that posed a threat to human health and the environment. The highest lead concentration in soil was 1,280 mg/kg.

**4. Remedial Action**

**Remedy Selection**

The ROD for the Beckman Instruments site was signed on September 26, 1989. For remediation purposes, the site was divided into three separate units: the upper aquifer, the upper aquitard and lower aquifer, and soil. Remedial alternatives were evaluated for each unit and the following remedies were selected:

1) **Upper Aquifer** - The extraction and treatment system in place at the time of the ROD would continue to operate, with air stripping and/or carbon adsorption as the treatment method for the contaminated groundwater and discharge of clean water to existing infiltration basins;

2) **Upper Aquitard and Lower Aquifer** - Installation of extraction wells screened into both the upper aquitard and lower aquifer with treatment of contaminated groundwater by the existing air stripping system and discharge into the existing infiltration basins; and

3) **Soil** - Excavation and off-site disposal of lead-contaminated soil.
The cleanup goal for the groundwater is the state or federal (whichever is lower) Maximum Contaminant Level (MCL) for each contaminant, and the cleanup goal for the soil was removal of all soil with lead levels above 200 ppm.

Remedy Implementation

In March 1990 Beckman completed the removal and off-site disposal of soil contaminated with lead. Beckman removed 18 cubic feet of soil, which was shipped to Kettlemen City in drums, and took confirmation samples indicating that all soils above 200 ppm lead had been removed. The excavated area was backfilled with clean soil.

In an Administrative Order issued by EPA on November 16, 1990, Beckman Instruments was ordered to complete the remedial design and remedial action at the site as specified in the ROD. EPA approved Beckman's Remedial Design Plan in March 1992 and the Remedial Action Plan in October 1992. Due to the previous remedial actions taken by Beckman at the site (soil removal and upper aquifer cleanup), the Remedial Action Plan addressed only the groundwater cleanup in the aquitard and lower aquifer.

The upper aquitard/lower aquifer remedial action took place in two phases. Beckman began installation of Phase I wells (four upper aquitard, four lower aquifer wells) in August 1991. EPA conducted an inspection of the extraction and treatment system on September 10, 1992. The Phase II well installation (six upper aquitard, four lower aquifer) began January 1993, with a site inspection taking place in June 1993.

The site achieved construction complete status when the Preliminary Close Out Report was signed on September 21, 1993. At that time EPA and the State determined that all RA construction activities were performed according to specifications.

System Operations and Maintenance

Due to the success of the remedial action, the upper aquifer reached ROD cleanup goals in January 1990. The upper aquifer extraction wells in both the eastern and western well fields were turned off and quarterly monitoring continued from 1990 to 1993.

From 1993 to 1997 the upper aquifer well fields were monitored every 15 months. In that period of time no wells had levels of contamination above cleanup goals. The upper aquifer is considered clean and has not been monitored since 1997.

Since 1994, the upper aquitard and lower aquifer groundwater has had only one contaminant, 1,1-DCE, remaining above its cleanup goal.

5. Progress Since the Last Five-Year Review

The first five-year review was completed April 3, 1998. In that review EPA determined that the current pump and treat system was no longer reducing the concentrations of 1,1-DCE in the upper aquitard and lower aquifer. EPA recommended that Beckman shut off the wells in order to test the effectiveness of the extraction system.
Shortly after the five-year review was completed Beckman began an extraction wellfield static test. This test was performed to determine the effectiveness of continuing to use the pump and treat system that was in operation. Concentrations of 1,1-DCE in the upper aquitard and lower aquifer had appeared to stabilize above the cleanup goal and the extent of the plume had not changed in several years.

For the wellfield test, the five remaining active extraction wells were shut off in April 1998. Due to natural attenuation 1,1-DCE concentrations decreased to, and remained below, cleanup goals in three of the extractions wells within one month. Concentrations remained the same in the fourth well (L-27-EW), and concentrations increased slightly in the fifth well (L-29-EW) to 45 ppb. This well was reactivated on July 29, 1998. In addition, one monitoring well was converted to an extraction well and started pumping on September 24, 1998, to assist in the remediation. By March 1999, 1,1-DCE concentrations had again stabilized in well L-29-EW at 16 ppb and the two extraction wells were shut off.

By 2001, the 1,1-DCE in the upper aquitard was 3.7 ppb, which is below the cleanup goal of 6 ppb. The lower aquifer had stabilized at approximately 20 to 25 ppb. In May 2001 Beckman Coulter submitted to EPA a Technical Impracticability Waiver Application stating that there were no remedial technologies that could effectively and affordably reduce 1,1-DCE concentrations to 6 ppb in the lower aquifer due to the slow, steady release of 1,1-DCE from the upper aquitard. Beckman Coulter requested that EPA waive the cleanup goal established in the ROD in those areas of the lower aquifer where 1,1-DCE concentrations are above 6 ppb.

After reviewing the Application, EPA determined that, due to the geology of the clay aquitard, the cleanup goal for 1,1-DCE could be met, not by an engineered technology but by monitored natural attenuation (MNA). Natural attenuation is the process by which hazardous chemicals are broken down naturally through chemical degradation, biological degradation, and/or diffusion. EPA intends to amend the ROD in 2004 to change the remedy from a pump and treat system to monitored natural attenuation.

6. Five-Year Review Process

Administrative Components

Members of the five-year review team consisted of the following EPA staff: Holly Hadlock, Remedial Project Manager; Jackie Lane, Community Involvement Coordinator; and Bill Keener, Attorney Advisor. The five-year review was conducted from June 2003 through September 2003.

The five-year review included a review of a number of relevant documents, including, but not limited to, the Record of Decision, the first Five-Year Review Report, and groundwater monitoring reports. (See Attachment 3, List of Documents Reviewed, for the complete list of documents).

Community Involvement

EPA sent a public notice to the Fresno newspaper, the Fresno Bee, on September 15,
2003. This notice informed the public that EPA was conducting the five-year review for the site and any comments about the cleanup at the site could be directed to Holly Hadlock or Jackie Lane.

Data Review

The groundwater is monitored annually at the site. The monitoring by Beckman Coulter in September 2001 indicated that the 1,1-DCE concentration in the upper aquitard was finally below the cleanup goal of 6 ppb. Currently the highest concentration of 1,1-DCE in the upper aquitard is 3.3 ppb in one well and is non-detect in five others.

In the lower aquifer 1,1-DCE was detected at levels above the cleanup goal in four wells (two extraction wells and two monitoring wells). The highest concentration of 1,1-DCE was 29 ppb. The concentration in the other three wells ranges from 8.9 to 13 ppb.

Site Inspection

The RPM conducted a site inspection on July 19. The purpose of the inspection was to confirm that all of the monitoring and extraction groundwater wells still in use are intact. The extractions wells are now used only for monitoring purposes. Ms. Hadlock met with Robert Keeley, the Beckman Coulter project manager, to discuss the site and the groundwater cleanup.

7. Technical Assessment

The following conclusions support the determination that the remedial measures implemented are protective of human health and the environment.

Question A: Is the remedy functioning as intended by the decision document? 

While the remedy functioned as intended for a number of years and was fully effective for the upper aquifer, by 1998, the pump and treat system was not as effective in reducing the one remaining contaminant, 1,1-DCE, to the cleanup goal of 6 ppb in the upper aquitard and lower aquifer.

Question B: Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives (RAOs) used at the time of the remedy selection still valid?

The exposure assumptions, toxicity data, cleanup levels, and RAOs are still valid. There are no changes in the ARARs associated with this site.

Question C: Has any other information come to light that could call into question the protectiveness of the remedy?

There is no other information that calls into question the protectiveness of the remedy.

8. Issues

As previously mentioned in this report, the groundwater pump and treat system was
unable to eliminate 1,1-DCE in a small area of the site. However, no one is exposed to groundwater with contamination. Residents do not drink the groundwater in the area as the residences in the area were connected to municipal water supplies in 1983.

Because the concentrations of 1,1-DCE are so low (8-29 ppb), and all other remedial technologies are not cost-effective, there are no other engineered remedies that should be implemented at this site. This is supported by the May 2001 Technical Impracticability Waiver Application submitted by Beckman Coulter. However, a technical impracticability waiver is not warranted at this site because monitored natural attenuation will enable the groundwater to reach cleanup goals. A future ROD amendment is planned to allow for an MNA remedy to apply to the remaining contaminated groundwater.

9. **Recommendations and Follow-Up Actions**

   Due to the natural processes occurring in the groundwater that assist in breaking down the 1,1-DCE into non-hazardous components, EPA intends to amend the ROD for the site, changing the remedy from pump and treat to monitored natural attenuation. The MNA remedy would include regular monitoring of the groundwater to ensure that the plume of 1,1-DCE does not spread and that concentrations do not rise significantly. If concentrations unexpectedly rise, EPA would evaluate the situation and determine an appropriate course of action. EPA anticipates that within ten years 1,1-DCE in the groundwater will be below the cleanup goal of 6 ppb.

10. **Protectiveness Statement**

    The remedial action for both the groundwater and soil continues to be protective of human health and the environment. However, because cleanup goals in the lower aquifer are not met, EPA will prepare a ROD amendment to ensure that long-term protectiveness is achieved.

11. **Next Review**

    The next five-year review for the Beckman Instruments Superfund Site is required in 2008, and will evaluate the protectiveness of the remedy selected in the Amended ROD for the lower aquifer.
List of Documents Reviewed

Comprehensive Five-Year Review Guidance, U.S. Environmental Protection Agency, EPA 540-R-01-007, OSWER No. 9355.7-03B-P, June 2001

Record of Decision, Beckman Instruments Site, Porterville, California, September 26, 1989


Administrative Order for Remedial Design and Remedial Action, November 16, 1990

EPA Memorandum from Elizabeth Keicher to Rusty Harris-Bishop, Subject: Beckman Instruments Superfund Site, December 30, 1992

Five-Year Review Report, Beckman Instruments Site, Porterville, California, April 3, 1998

Technical Impracticability Waiver Application, Beckman Coulter, Inc. Site, Porterville, California, May 23, 2001

Five-Year Review Report
Third Five-Year Review Report
for
Beckman Instruments Superfund Site
Porterville, California
September 2008

PREPARED BY:
United States Environmental Protection Agency
Region 9
San Francisco, California

Approved by:

Kathleen Salyer, Assistant Director
Superfund Division
California Site Cleanup Branch
U.S. EPA, Region 9

Date: 9/18/08
# Five-Year Review Report

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## List of Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARAR</td>
<td>applicable or relevant and appropriate requirement</td>
</tr>
<tr>
<td>bgs</td>
<td>below ground surface</td>
</tr>
<tr>
<td>CERCLA</td>
<td>Comprehensive Environmental Response, Compensation, and Liability Act</td>
</tr>
<tr>
<td>CFR</td>
<td>Code of Federal Regulations</td>
</tr>
<tr>
<td>DCA</td>
<td>dichloroethane</td>
</tr>
<tr>
<td>1,1-DCE</td>
<td>1,1-dichloroethylene</td>
</tr>
<tr>
<td>EPA</td>
<td>United States Environmental Protection Agency</td>
</tr>
<tr>
<td>MNA</td>
<td>monitored natural attenuation</td>
</tr>
<tr>
<td>MCL</td>
<td>Maximum Contaminant Level</td>
</tr>
<tr>
<td>NCP</td>
<td>National Contingency Plan</td>
</tr>
<tr>
<td>O&amp;M</td>
<td>Operation and Maintenance</td>
</tr>
<tr>
<td>µg/L</td>
<td>micrograms per liter</td>
</tr>
<tr>
<td>ppm</td>
<td>part per million</td>
</tr>
<tr>
<td>RAOs</td>
<td>remedial action objectives</td>
</tr>
<tr>
<td>RPM</td>
<td>Remedial Project Manager</td>
</tr>
<tr>
<td>ROD</td>
<td>Record of Decision</td>
</tr>
<tr>
<td>TCA</td>
<td>trichloroethane</td>
</tr>
<tr>
<td>TCE</td>
<td>trichlorethylene</td>
</tr>
<tr>
<td>VOC</td>
<td>volatile organic compound</td>
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</table>
Executive Summary

The original 1989 remedy for contaminated groundwater and soil at the Beckman Instruments Superfund Site (the Site) in Porterville, California was groundwater pump and treat and soil excavation. After successfully removing the contaminated soil and cleaning up 95% of the contaminated groundwater, the United States Environmental Protection Agency (EPA) amended the remedy in 2005 to monitored natural attenuation (MNA) for two small areas of groundwater contaminated with 1,1-dichloroethylene (1,1-DCE) that exceeded cleanup levels. The trigger for this five-year review was the second five-year review conducted in 2003.

This five-year review found that both the original remedy and amended remedy were implemented in accordance with the requirements of the September 1989 Record of Decision and the September 2005 Record of Decision Amendment. The current MNA remedy is functioning as designed. The remedy is protective of human health and the environment.
**Five-Year Review Summary Form**

<table>
<thead>
<tr>
<th>SITE IDENTIFICATION</th>
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<tr>
<td>Site name: Beckman Instruments</td>
</tr>
<tr>
<td>EPA ID: CAD048645444</td>
</tr>
<tr>
<td>Region: 9 State: CA City/County: Porterville, Tulare County</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>SITE STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPL status: ☒ Final ☐ Deleted ☐ Other (specify)</td>
</tr>
<tr>
<td>Remediation status (choose all that apply): ☒ Under Construction ☒ Operating ☐ Complete</td>
</tr>
<tr>
<td>Multiple OUs?: ☐ YES ☐ NO ☒ Construction completion date: 9/21/1993</td>
</tr>
<tr>
<td>Has site been put into reuse?: ☐ YES ☐ NO ☒ N/A</td>
</tr>
</tbody>
</table>

<table>
<thead>
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<th>REVIEW STATUS</th>
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</thead>
<tbody>
<tr>
<td>Lead agency: ☒ EPA ☐ State ☐ Tribe ☐ Other Federal Agency</td>
</tr>
<tr>
<td>Author name: Holly Hadlock</td>
</tr>
<tr>
<td>Author title: Remedial Project Manager</td>
</tr>
<tr>
<td>Review period: 3/2008 to 9/2008</td>
</tr>
<tr>
<td>Date(s) of site inspection: 7/10/2008</td>
</tr>
<tr>
<td>Type of review: ☒ Post-SARA ☐ Pre-SARA ☐ NPL-Removal only ☐ NPL State/Tribe-lead ☐ Regional Discretion</td>
</tr>
<tr>
<td>Review number: ☒ 1 (first) ☐ 2 (second) ☒ 3 (third) ☐ Other (specify)</td>
</tr>
<tr>
<td>Triggering action: ☒ Actual RA Onsite Construction at OU #2 ☐ Actual RA Start at OU# ☒ Construction Completion ☐ Previous Five-Year Review Report</td>
</tr>
<tr>
<td>Triggering action date (from WastelAN): 09/29/2003</td>
</tr>
<tr>
<td>Due date (five years after triggering action date): 09/29/2008</td>
</tr>
</tbody>
</table>

*"OU" refers to operable unit.*

**Issues:**

There are no issues that affect protectiveness.

**Protectiveness Statement:**

The Beckman Instruments remedy is protective of human health and the environment.

**Other Comments:**

None
Five-Year Review Report

I. Introduction

The purpose of five-year reviews is to determine whether the remedy at a site is protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in five-year review reports. In addition, five-year review reports identify issues found during the review and present recommendations to address them. EPA is preparing this five-year review report pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) §121 and the National Contingency Plan (NCP). CERCLA §121 states:

If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action no less often than each five years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented. In addition, if upon such review it is the judgement of the President that action is appropriate at such site in accordance with section [104] or [106], the President shall take or require such action. The President shall report to the Congress a list of facilities for which such review is required, the results of all such reviews, and any actions taken as a result of such reviews.

EPA interpreted this requirement further in the NCP; 40 CFR §300.430(f)(4)(ii) states:

If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, the lead agency shall review such action no less often than every five years after the initiation of the selected remedial action.

EPA Region 9 has conducted a five-year review of the remedy implemented at the Beckman Instruments Superfund Site in Porterville, California. This review was conducted from March 2008 through September 2008 by the Remedial Project Manager (RPM). This report documents the results of the review.

This is the third five-year review for the Site. EPA is preparing this five-year review as a matter of policy because the remedial action has taken longer than five years to complete. The triggering action for this policy review is the date of second five-year review, September 29, 2003.
II. Site Chronology

Table 1: Chronology of Site Events

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial wastes disposed on-site</td>
<td>1967 - 1983</td>
</tr>
<tr>
<td>Leak detected in on-site evaporation pond</td>
<td>1978</td>
</tr>
<tr>
<td>CA RWQCB issued order to investigate groundwater contamination</td>
<td>1982</td>
</tr>
<tr>
<td>Discharge to pond discontinued</td>
<td>1983</td>
</tr>
<tr>
<td>Beckman begins operation of groundwater pump and treat system</td>
<td>July 1985</td>
</tr>
<tr>
<td>NPL Listing</td>
<td>June 10, 1986</td>
</tr>
<tr>
<td>Beckman installs 2nd pump and treat system in eastern portion of site</td>
<td>July 1987</td>
</tr>
<tr>
<td>ROD selecting the final remedy</td>
<td>September 26, 1989</td>
</tr>
<tr>
<td>Contaminated soil excavated and disposed off-site</td>
<td>1990</td>
</tr>
<tr>
<td>Cleanup levels reached in upper aquifer</td>
<td>1990</td>
</tr>
<tr>
<td>Additional extraction wells added to upper aquitard and lower aquifer</td>
<td>1992-1993</td>
</tr>
<tr>
<td>First five-year review</td>
<td>1998</td>
</tr>
<tr>
<td>Pump test of upper aquitard/lower aquifer extraction wells</td>
<td>1998</td>
</tr>
<tr>
<td>EPA approves Beckman proposal to change remedy to monitored natural attenuation</td>
<td>2001</td>
</tr>
<tr>
<td>Second five-year review</td>
<td>2003</td>
</tr>
<tr>
<td>ROD Amendment</td>
<td>September 2005</td>
</tr>
<tr>
<td>Interim Remedial Action Report</td>
<td>March 2007</td>
</tr>
</tbody>
</table>

III. Background

Physical Characteristics

The Site, which includes the Beckman plant and surrounding study area, is located near the southern limit of the City of Porterville, California. Porterville is located in Tulare County about 25 miles southeast of Visalia on the eastern fringe of California’s San Joaquin Valley (Figure 1, Site Location Map). The Site is approximately 160 acres and consists of the Beckman plant property and other privately owned commercial, agricultural, and residential property located to the west of the Beckman plant.

The Beckman plant is located at 167 West Poplar Avenue and occupies approximately 12 acres. The Site is generally bounded by the Tule River to the north, plant property to the east, Poplar ditch to the south, and Newcomb Drive to the west (Figure 2, Hydrogeologic Units).

The City of Porterville is situated on a broad alluvial fan of the Tule River. Much of this fan forms a relatively flat alluvial plain, characterized by surfaces of low topographic relief which rarely exceed 10 feet of elevation change, except in the vicinity of the river.
The Site aquifer system consists of an upper aquifer, upper aquitard, and lower aquifer. These units are the uppermost portions of a westward thickening wedge of sediments of continental origin. The upper aquifer is comprised of silt, sand, gravel, and cobbles. Groundwater first occurs in the upper aquifer under unconfined conditions. Historical depth to water has ranged from approximately 7 to 42 feet bgs. Groundwater flow in this aquifer is to the west and northwest across the site. Analysis of groundwater flow in the aquifer predicts the remaining contaminant plume will travel less than 1,350 feet by the year 2025.

The top of the upper aquitard is located approximately 50 feet bgs in the vicinity of the Beckman plant and is approximately 46 to 51 feet thick in that location. It is comprised of a fine-grained sequence of silt, clayey silt, and sandy clay. The upper aquitard is a low-permeable confining unit between the upper aquifer and the lower aquifer.

The lower aquifer occurs below the upper aquitard throughout the Site. The top of this unit ranges in depth from approximately 80 to 130 feet below ground surface. The lower aquifer is comprised of silty to clayey sand and gravel with interbedded silt and clay. Generally, the lower aquifer materials contain a greater percentage of fine-grained sediments and interbeds than the upper aquifer. The lower aquifer is estimated to extend to a depth of approximately 180 to 220 feet bgs throughout the Site.

**Land and Resource Use**

Land use in the Beckman area includes residences, field crops, orchards, grazing, commercial/industrial, and vacant land. The City of Porterville uses groundwater wells throughout the city for its drinking water supply. The groundwater aquifers underlying the historical area of Beckman contamination associated with the Site are currently not used as a drinking water source due to a moratorium on well use and well construction issued by Tulare County.

**History of Contamination**

Beckman Instruments, now operating as Beckman Coulter, Inc., has manufactured electronic equipment assemblies and printed circuit boards in Porterville since 1967. Industrial processes used at the plant include electroplating and degreasing. From 1975 until early 1983, waste streams were discharged to an on-site evaporation pond. The leak detection system detected a leak in the waste pond in July 1978 and then detected intermittent leaks until 1981. Additionally, an above-ground pipe carrying electroplating wastes to the pond also leaked, contaminating soil near the plant with lead.

**Initial Response**

In 1983, Beckman closed the evaporation pond due to leaking. Beckman conducted groundwater monitoring activities in late 1982 and early 1983, which revealed the presence of volatile organic compounds (VOCs) in the groundwater below the evaporation pond. VOCs were also present in residential wells located west of the plant. After the discovery of the groundwater contamination, the California Department of Health Services and the
California Regional Water Quality Control Board directed Beckman to determine the extent of the groundwater contamination. Beckman provided bottled water to approximately 300 residences located near the plant and eight private wells were sealed or replaced to further limit the spread of contamination. Eventually all residences in the area were connected to the City water system.

On December 2, 1983, the County of Tulare Health and Human Services Agency issued a memorandum to all District Sanitarians that imposed a moratorium on well drilling in areas downgradient of the Site. This institutional control prohibits the approval of building permits for property owners proposing to obtain water from wells in the Site area. The moratorium remains in effect today.

By June 1985 Beckman determined that contaminants had migrated westward 9,000 feet downgradient of the Site. In July 1985 Beckman installed an upper aquifer extraction and treatment system and expanded it in July 1987. The treated groundwater from the air stripping facility was used for agricultural irrigation or discharged to infiltration basins located near the Tule River.

EPA added the Site to the National Priorities List in June 1986.

**Basis for Taking Action**

Volatile organic compounds (VOCs) were the primary contaminants found above state and federal drinking water standards at the Beckman site. The VOCs found are mobile in groundwater and are probable and/or potential carcinogens. The most prevalent contaminant in the upper aquifer was 1,1,1-trichloroethane (1,1,1-TCA). The most prevalent contaminant in the lower aquifer was 1,1-dichloroethylene (1,1-DCE). Other contaminants found in the groundwater were Freon 113, trichloroethylene (TCE), and 1,1 dichloroethane (1,1-DCA). Exceedances of drinking water standards for 1,1,1-TCA and 1,1-DCE were detected in the upper aquifer, upper aquitard, and lower aquifer, and up to 9,000 feet downgradient in the upper aquifer.

**IV. Remedial Actions**

**Remedy Selection**

**1989 ROD**

EPA issued the ROD for the Beckman Instruments Site on September 26, 1989. For remedial purposes, the Site was separated into three areas: 1) Upper Aquifer, 2) Upper Aquitard and Lower Aquifer, and 3) Lead-contaminated Soils. The remedial action objectives were to restore groundwater to beneficial use and to remove lead-contaminated soil to below residential levels. The cleanup goal for the groundwater was the more stringent level among the State or Federal Maximum Contaminant Level (MCL) and the State Action Level for each contaminant.
Table 2
1989 ROD Cleanup Standards

<table>
<thead>
<tr>
<th>Groundwater</th>
<th>1,1,1-TCA</th>
<th>200 µg/L</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,1-DCE</td>
<td></td>
<td>6 µg/L</td>
</tr>
<tr>
<td>Freon 113</td>
<td></td>
<td>1200 µg/L</td>
</tr>
<tr>
<td>1,1-DCA</td>
<td></td>
<td>5 µg/L</td>
</tr>
<tr>
<td>TCE</td>
<td></td>
<td>5 µg/L</td>
</tr>
<tr>
<td>Soil</td>
<td>Lead</td>
<td>200 ppm</td>
</tr>
</tbody>
</table>

The following remedies were selected:

- Upper Aquifer: Continuation of the existing upper aquifer extraction, treatment and discharge systems
- Upper Aquitard/Lower Aquifer: Concurrent upper aquitard and lower aquifer extraction, treatment, and discharge; installation of extraction wells and treatment of extracted water using existing air stripping facilities
- Soils: Excavation of lead-contaminated soils and off-site disposal of the excavated soils

2005 ROD Amendment

By 1999 1,1-DCE was the only contaminant above its cleanup goal of 6 µg/L. It was present in two small, localized areas of the lower aquifer. Further study indicated these small areas were not likely to be cleaned up by various pump and treat alternatives in a reasonable time frame and at reasonable cost. EPA determined it was no longer cost effective to address the remaining groundwater contamination with an engineered remedy. On September 27, 2005, EPA amended the ROD and changed the remedy from groundwater extraction and treatment to monitored natural attenuation (MNA).

Remedy Implementation

1989 ROD Implementation

In March 1990 Beckman completed the removal and off-site disposal of soil contaminated with lead. Beckman removed 18 cubic feet of soil, which was shipped in drums to Kettleman City. Confirmation samples indicated that all soils above 200 ppm lead had been removed. The excavated area was backfilled with clean soil.

Due to the groundwater cleanup actions taken by Beckman before the ROD was signed, the upper aquifer was successfully cleaned up by September 1989 and all contaminants were below their respective MCLs. In 1990 Beckman ceased operation of the upper aquifer wellfield.
The upper aquitard and lower aquifer remedial action took place in two phases. The Phase I extraction wellfield, which included four upper aquitard extraction wells and five lower aquifer extraction wells, began operating in August 1991. Operation of the Phase II wellfield, which added four new monitor wells and 10 new extraction wells, began in January 1993.

The site achieved construction complete status when EPA issued the Preliminary Close Out Report on September 21, 1993. EPA and the State determined that all RA construction activities were performed according to specifications.

2005 ROD Amendment Implementation

The MNA remedy included installation of four new monitor wells, three of which are downgradient sentinel wells, as well as use of five existing monitor wells. Beckman installed three sentinel monitor wells downgradient of the two areas with 1,1-DCE above 6µg/L (Figure 3, Monitoring Locations). Beckman prepared an MNA plan that calls for annual monitoring and submittal of an annual monitoring report to EPA. Monitor well L-03, which had the highest 1,1-DCE concentration, was abandoned in 2007 and replaced with MNA-4 due to the new property owner's pending development. All of the newly installed MNA wells are in public rights-of-way to avoid complications of private site access and the resulting need to maintain long-term lease agreements with private land owners.

System Operations/Operation and Maintenance (O&M)

1989 ROD

The upper aquifer groundwater extraction system operated from 1985 to 1990. Monitoring continued until 1997, after which all upper aquifer wells were abandoned. The upper aquitard/lower aquifer extraction system operated from 1991 to 1999, by which time virtually all of the upper aquitard and lower aquifer was successfully remediated. In 1999 only two small localized areas of the upper aquitard and lower aquifer remained above cleanup goals. Further focused operation of the pump and treat system in one of these areas failed to show progress toward achieving cleanup goals due to the inability to accelerate contaminant removal from the upper aquitard. This inability to clean up the groundwater with the pump and treat system led EPA to amend the ROD in 2005.

2005 ROD Amendment

Operation and maintenance activities for the MNA remedy are minimal. The only O&M activities are the annual water level measurements and sampling of the lower aquifer groundwater. The MNA remedy required four quarterly sampling of the four newly installed lower aquifer monitor wells followed by annual sampling. In May 2007 Beckman submitted to EPA the first annual MNA report. Beckman now conducts annual monitoring.
V. Progress Since the Last Review

In the previous (second) five-year review EPA recommended amending the ROD to change the remedy from pump and treat to MNA. EPA issued a ROD amendment on September 27, 2005.

VI. Five-Year Review Process

Administrative Components

The Beckman Five-Year Review team was led by Holly Hadlock of EPA, Remedial Project Manager (RPM) for the Site. Cynthia Wetmore, Superfund Technical Support, and Richard Mednick, Regional Counsel, provided assistance.

Community Notification and Involvement

For the five-year review EPA sent a public notice to the Porterville newspaper, the Porterville Recorder, on August 19, 2008. Notices were also published in Spanish in two Spanish-language papers, Noticiero Semanal in Porterville on August 22 and El Sol in Visalia on August 23. These notices informed the public that EPA was conducting the five-year review and that the five-year review report would be available both online and in the local repository, the Porterville Library.

Document Review

This five-year review consisted of a review of relevant documents (Attachment 1), O&M records, and monitoring data. Applicable groundwater cleanup standards of the 2005 ROD Amendment were reviewed (Attachment 2, ARAR Analysis).

Data Review

1,1-DCE is the only contaminant remaining in the groundwater above ROD cleanup goals. At the time of the second five-year review, 1,1-DCE was present west of the Beckman plant in two small areas in the lower aquifer. Three wells, L-03, L-27-EW and L-29-EW, had 1,1-DCE above 6 μg/L, with the highest concentration in L-03. The following table shows contaminant concentrations when the ROD was amended in 2005:

<table>
<thead>
<tr>
<th>WELL</th>
<th>1,1-TCA</th>
<th>1,1-DCE</th>
<th>FREON 113</th>
<th>1,1-DCA</th>
<th>TCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cleanup Goal</td>
<td>200</td>
<td>1200</td>
<td>5.0</td>
<td>5.0</td>
<td></td>
</tr>
<tr>
<td>Upper Aquitard Wells</td>
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<td>------</td>
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<td>AQ-02-PZ2</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AQ-11-EW</td>
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<td>&lt;0.5</td>
<td>&lt;0.5</td>
<td>&lt;0.5</td>
<td>&lt;0.5</td>
</tr>
<tr>
<td>AQ-11-PZ1</td>
<td>&lt;0.5</td>
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<td>&lt;0.5</td>
<td>&lt;0.5</td>
<td>&lt;0.5</td>
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<tr>
<td>AQ-11-PZ2</td>
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<td>2.4</td>
<td>1.6</td>
<td>&lt;0.5</td>
<td>&lt;0.5</td>
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</table>

**Lower Aquifer Wells**

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<thead>
<tr>
<th></th>
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<th>&lt;0.5</th>
<th>&lt;0.5</th>
<th>&lt;0.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>AQ-02-LO</td>
<td>&lt;0.5</td>
<td>4.9</td>
<td>2.8</td>
<td>&lt;0.5</td>
<td>&lt;0.5</td>
</tr>
<tr>
<td>AQ-02-LP</td>
<td>&lt;0.5</td>
<td>3</td>
<td>1.4</td>
<td>0.57</td>
<td>&lt;0.5</td>
</tr>
<tr>
<td>L-03</td>
<td>&lt;0.5</td>
<td>31</td>
<td>16</td>
<td>1.2</td>
<td>0.62</td>
</tr>
<tr>
<td>L-05</td>
<td>&lt;0.5</td>
<td>&lt;0.5</td>
<td>&lt;0.5</td>
<td>&lt;0.5</td>
<td>&lt;0.5</td>
</tr>
<tr>
<td>L-06</td>
<td>&lt;0.5</td>
<td>&lt;0.5</td>
<td>&lt;0.5</td>
<td>&lt;0.5</td>
<td>&lt;0.5</td>
</tr>
<tr>
<td>L-07</td>
<td>&lt;0.5</td>
<td>1.2</td>
<td>&lt;0.5</td>
<td>0.73</td>
<td>&lt;0.5</td>
</tr>
<tr>
<td>L-08</td>
<td>&lt;0.5</td>
<td>&lt;0.5</td>
<td>&lt;0.5</td>
<td>&lt;0.5</td>
<td>&lt;0.5</td>
</tr>
<tr>
<td>L-09</td>
<td>&lt;0.5</td>
<td>&lt;0.5</td>
<td>&lt;0.5</td>
<td>&lt;0.5</td>
<td>&lt;0.5</td>
</tr>
<tr>
<td>L-17</td>
<td>&lt;0.5</td>
<td>&lt;0.5</td>
<td>&lt;0.5</td>
<td>&lt;0.5</td>
<td>&lt;0.5</td>
</tr>
<tr>
<td>L-27-EW</td>
<td>&lt;0.5</td>
<td>6.7</td>
<td>3.9</td>
<td>&lt;0.5</td>
<td>&lt;0.5</td>
</tr>
<tr>
<td>L-28</td>
<td>&lt;0.5</td>
<td>2.1</td>
<td>1.7</td>
<td>&lt;0.5</td>
<td>0.68</td>
</tr>
<tr>
<td>L-29-EW</td>
<td>&lt;0.5</td>
<td>8.3</td>
<td>4</td>
<td>1.4</td>
<td>&lt;0.5</td>
</tr>
</tbody>
</table>

The new monitor wells, MNA-1, MNA-2, MNA-3 and MNA-4, were installed in the lower aquifer zone in 2006 during implementation of the MNA remedy, with MNA-4 replacing L-3. The six upper aquitard wells and one lower aquifer well, AQ-02-LP, were decommissioned in 2007.

As part of the MNA program, Beckman conducted quarterly sampling of the four new wells for the first year and annual sampling thereafter. The annual sampling program includes nine monitor wells. Four wells, L-05, L-08, L-09 and L-17 are considered contingent wells and are not sampled annually. All of the wells are in the lower aquifer; there are no more wells in the upper aquifer. Beckman prepares an annual performance monitoring report, comparing the trends in groundwater concentrations to the predicted trends in the MNA analysis.

Results from the first annual MNA report (Feb. 2008) show that seven of the ten wells had concentrations below action levels for all contaminants of concern. The compound, 1,1-1 TCA was non-detect for all wells. Three wells had exceedences of 1,1-DCE as shown below. All other contaminants of concern were below their respective action level.

The second annual MNA report (June 2008) indicated that only one well, MNA-4, exceeded the cleanup goal. The data in Table 4 show that concentrations of 1,1-DCE continue to decline. Both L-27-EW and L-29-EW are now below the cleanup goal of 6 µg/L. According to the annual monitoring reports, the contamination concentrations are following their predicted trends.
Table 4
Data from MNA Program

<table>
<thead>
<tr>
<th>Results for 1,1-DCE</th>
<th>May-06</th>
<th>Aug-06</th>
<th>Nov-06</th>
<th>Feb-07</th>
<th>May-07</th>
<th>Mar-08</th>
</tr>
</thead>
<tbody>
<tr>
<td>MNA-4</td>
<td>NS</td>
<td>33 µg/L</td>
<td>42 µg/l</td>
<td>46 µg/l</td>
<td>30 µg/l</td>
<td>19 µg/L</td>
</tr>
<tr>
<td>L-27-EW</td>
<td>6.6 µg/L</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>5.0 µg/L</td>
</tr>
<tr>
<td>L-29-EW</td>
<td>5.3 µg/L</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>4.7µg/L</td>
</tr>
</tbody>
</table>

Site Inspection

Holly Hadlock conducted the site inspection on July 10, 2008. Robert Keeler, the Beckman Project Manager, participated in the inspection and provided information. The purpose of the inspection was to locate all monitor wells and confirm that they were properly secured and in good condition. All wells were found to be in good condition. A copy of the Site Inspection Checklist is included in Attachment 3.

Interviews

The RPM telephoned the Porterville City Manager John Longley on July 18, 2008, and asked him if there were/are issues or concerns about the Beckman Superfund Site. He replied that the Site has not been an issue of significant concern in the community, that Beckman has done a very good job of taking care of the groundwater contamination, and that there has been no major City involvement in the past five years. During Mr. Longley's last contact with Beckman he was told the cleanup is in the final stages.

VII. Technical Assessment

Question A: Is the remedy functioning as intended by the decision documents?

The review of documents, ARARs, risk assumptions, and the results of the site inspection indicate that the remedy is functioning as intended by the ROD Amendment. The remedy has achieved the remedial objective of protecting human health and the environment by continuing to eliminate exposure to contaminated groundwater. Progress is being made toward meeting the second remedial objective, which is to reduce contamination in groundwater to concentrations that meet cleanup goals and return groundwater to beneficial use. Concentrations of 1,1-DCE in the groundwater continue to decrease.

Question B: Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives (RAOs) used at the time of remedy selection still valid?

There have been no changes in the physical conditions of the site that would affect the protectiveness of the remedy. The RAOs used at the time of remedy selection are still valid. There have been no changes in the ARARs and no new standards or requirements affecting the protectiveness of the remedy.
There have been several changes to the toxicity values since the completion of the Baseline Risk Assessment in 1988 (see Attachment 4, Toxicity Review Summary Memorandum). The greatest change in values is for TCE, where current information indicates that TCE may be more toxic than originally assumed. However, current levels of TCE in groundwater are below the MCL which is considered protective. Recent toxicity data for 1,1-DCE indicate that it is less toxic than originally assumed in the Baseline Risk Assessment.

The current screening level for soil ingestion of lead is 400 ppm for residential exposure which is greater than the clean-up level used in 1989.

**Question C: Has any other information come to light that could call into question the protectiveness of the remedy?**

There is no other information that calls into question the protectiveness of the remedy.

**Technical Assessment Summary**

According to the data reviewed and the site inspection, the remedy is functioning as intended by the ROD Amendment. There have been no changes in the physical conditions of the site that would affect the protectiveness of the remedy. With the exception of the MCL for 1,1-DCE, the remedy is meeting all ARARs in the ROD Amendment and there have been no changes in ARARs affecting the protectiveness of the remedy. With respect to 1,1-DCE, the remedy is on target to attain that ARAR. There have been no changes in the toxicity factors for the contaminants of concern that were used in the previous risk assessments or the standardized risk assessment methodology that could affect the protectiveness of the remedy. There is no other information that calls into question the protectiveness of the remedy.

**VIII. Issues**

There are no issues at the Beckman site. The current monitoring plan is adequate.

**IX. Recommendations and Follow-up Actions**

EPA has no recommendations and follow-up actions.

**X. Protectiveness Statement**

The remedy at Beckman Instruments is protective of human health and the environment.

**XI. Next Review**

The next five-year review for the Beckman Instruments Superfund Site is required by September 2013, five years from the date of this review.
Attachment 1 – List of Documents Reviewed


MEMORANDUM FOR RECORD

SUBJECT: ARAR Analysis, Beckman Instruments Superfund Site, Five-Year Review

PREPARED BY: Emile Pitre, Chemical Engineer, Seattle District, U.S. Army Corps of Engineers

DATE: 1 August 2008

Seattle District, U.S. Army Corps of Engineers is assisting the U.S. Environmental Protection Agency, Region 9, with the completion of statutorily required five-year reviews. As requested by EPA, one of the steps in evaluating the protectiveness of an implemented remedy is a review of the applicable or relevant and appropriate requirements (ARARs) for federal, state, or local regulations related to human health or the environment. The goal of the ARAR review is to determine if changes in the ARARs identified in the Record of Decision (ROD) impact the protectiveness of the remedy. This memorandum is the ARAR evaluation for the Beckman Instruments Superfund Site five-year review.

All chemical specific ARARs have remained unchanged from the date of the original ROD. Only proposed MCLs for 1,1-dichloroethane and Freon 113 were available at the time the ROD was signed. These levels have since been promulgated and are now State Primary Drinking Water MCLs. These contaminants are no longer present at the site.

The initial ROD and ROD Amendment mention the ARARs, but lack detail to how the regulations are applicable or relevant and appropriate to the remedy. This ARAR analysis was performed by reviewing the ARARs in the ROD Amendment in conjunction with a review of current ARARs from other similar sites in California. The ROD amendment, dated September 2005, selected monitored natural attenuation (MNA) as the remedy that will reduce concentrations of the sole remaining chemical of concern, 1,1-dichloroethene (1,1-DCE), to below the State maximum contaminant level (MCL) of 6 µg/L. This cleanup goal meets all drinking water ARARs. There are no other ARARs for this site.

All of the cleanup goals listed in the ROD, listed below in Table 1, remain unchanged.

<table>
<thead>
<tr>
<th>Contaminant</th>
<th>Standard in ROD (µg/L)</th>
<th>Citation</th>
<th>New Standard (µg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,1-dichloroethane</td>
<td>5</td>
<td>State MCL</td>
<td>unchanged</td>
</tr>
<tr>
<td>1,1-dichloroethylene</td>
<td>6</td>
<td>State MCL</td>
<td>unchanged</td>
</tr>
<tr>
<td>1,1,1-Trichloroethane</td>
<td>200</td>
<td>State /Federal MCL</td>
<td>unchanged</td>
</tr>
<tr>
<td>Trichloroethylene</td>
<td>5</td>
<td>State /Federal MCL</td>
<td>unchanged</td>
</tr>
<tr>
<td>Freon 113</td>
<td>1,200</td>
<td>State MCL</td>
<td>unchanged</td>
</tr>
<tr>
<td>Medium / Authority</td>
<td>ARAR</td>
<td>Status</td>
<td>Standard Applied in ROD</td>
</tr>
<tr>
<td>-------------------</td>
<td>----------------------------------------------------------------------</td>
<td>--------------------</td>
<td>------------------------------------------------------</td>
</tr>
<tr>
<td>Contaminant Specific ARARS</td>
<td>Federal – SDWA – Maximum Contaminant Levels (MCLs) (40 CFR Part 141.11-141.6) and non-zero Maximum Contaminant Levels Goals (MCLGs)</td>
<td>Relevant and Appropriate</td>
<td>Federal or State MCL, whichever is most stringent.</td>
</tr>
<tr>
<td>Action Specific ARARS</td>
<td>Porter-Cologne Water Quality Act</td>
<td>Relevant and Appropriate</td>
<td>Establishes authority for State and Regional Water Boards to determine site-specific discharge requirements and to regulate disposal of waste to land.</td>
</tr>
</tbody>
</table>
Please note that "O&M" is referred to throughout this checklist. At sites where Long-Term Response Actions are in progress, O&M activities may be referred to as "system operations" since these sites are not considered to be in the O&M phase while being remediated under the Superfund program.

### Five-Year Review Site Inspection Checklist (Template)

(Working document for site inspection. Information may be completed by hand and attached to the Five-Year Review report as supporting documentation of site status. "N/A" refers to "not applicable.")

<table>
<thead>
<tr>
<th>I. SITE INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Site name:</strong> Beckman Instruments</td>
</tr>
<tr>
<td><strong>Location and Region:</strong> Porterville, Reg 9</td>
</tr>
<tr>
<td><strong>Agency, office, or company leading the five-year review:</strong> US EPA</td>
</tr>
</tbody>
</table>

**Remedy Includes:** (Check all that apply)
- ☑ Landfill cover/containment
- ☑ Monitored natural attenuation
- ☑ Access controls
- ☑ Groundwater containment
- ☑ Institutional controls
- ☑ Vertical barrier walls
- ☑ Groundwater pump and treatment
- ☑ Surface water collection and treatment
- ☑ Other

**Attachments:**
- ☐ Inspection team roster attached
- ☐ Site map attached

<table>
<thead>
<tr>
<th>II. INTERVIEWS (Check all that apply)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. O&amp;M site manager <strong>Robert Keeley</strong> Mgr, Environ</td>
</tr>
<tr>
<td>Interviewed ☑ at site ☐ at office ☐ by phone</td>
</tr>
<tr>
<td>Problems, suggestions; ☐ Report attached</td>
</tr>
</tbody>
</table>

2. O&M staff **Ed Nemecek** Principal Hydrogeologist | **Name:** Ed Nemecek Principal Hydrogeologist | **Date:** Numerous days |
| Interviewed ☐ at site ☑ at office ☑ by phone | **Phone no.:** 480-345-0888 x 240 |
| Problems, suggestions; ☐ Report attached |
3. Local regulatory authorities and response agencies (i.e., State and Tribal offices, emergency response office, police department, office of public health or environmental health, zoning office, recorder of deeds, or other city and county offices, etc.) Fill in all that apply.

<table>
<thead>
<tr>
<th>Agency</th>
<th>Contact</th>
<th>Name (Fresno)</th>
<th>Title</th>
<th>Date</th>
<th>Phone no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>RWQCB</td>
<td>Shelton Grey</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Problems; suggestions; □ Report attached</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calif. DTSC</td>
<td>Cali. DTSC</td>
<td>Ed Pargile</td>
<td>Site Manager</td>
<td>916-255-3703</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Problems; suggestions; □ Report attached</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. Other interviews (optional) □ Report attached.

John Longley, Porterville City Manager (7/18 phone call)
### III. ON-SITE DOCUMENTS & RECORDS VERIFIED (Check all that apply)

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>O&amp;M Documents</td>
<td>- M N A Plan + Reports</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>O&amp;M manual</td>
<td>☒ Readily available</td>
<td>☒ Up to date</td>
<td>☐ N/A</td>
</tr>
<tr>
<td></td>
<td>As-built drawings</td>
<td>☐ Readily available</td>
<td>☐ Up to date</td>
<td>☐ N/A</td>
</tr>
<tr>
<td></td>
<td>Maintenance logs</td>
<td>☐ Readily available</td>
<td>☐ Up to date</td>
<td>☐ N/A</td>
</tr>
<tr>
<td>Remarks</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Site-Specific Health and Safety Plan</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Contingency plan/emergency response plan</td>
<td>☐ Readily available</td>
<td>☐ Up to date</td>
<td>☐ N/A</td>
</tr>
<tr>
<td>Remarks</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>O&amp;M and OSHA Training Records</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Remarks</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Permits and Service Agreements</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Air discharge permit</td>
<td>☐ Readily available</td>
<td>☐ Up to date</td>
<td>☒ N/A</td>
</tr>
<tr>
<td></td>
<td>Effluent discharge</td>
<td>☐ Readily available</td>
<td>☐ Up to date</td>
<td>☒ N/A</td>
</tr>
<tr>
<td></td>
<td>Waste disposal, POTW</td>
<td>☐ Readily available</td>
<td>☐ Up to date</td>
<td>☐ N/A</td>
</tr>
<tr>
<td></td>
<td>Other permits</td>
<td>☐ Readily available</td>
<td>☐ Up to date</td>
<td>☒ N/A</td>
</tr>
<tr>
<td>Remarks</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Gas Generation Records</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remarks</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Settlement Monument Records</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remarks</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Groundwater Monitoring Records</td>
<td>☒ Readily available</td>
<td>☐ Up to date</td>
<td>☐ N/A</td>
</tr>
<tr>
<td>Remarks</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Leachate Extraction Records</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remarks</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Discharge Compliance Records</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Air</td>
<td>☐ Readily available</td>
<td>☐ Up to date</td>
<td>☒ N/A</td>
</tr>
<tr>
<td></td>
<td>Water (effluent)</td>
<td>☐ Readily available</td>
<td>☐ Up to date</td>
<td>☒ N/A</td>
</tr>
<tr>
<td>Remarks</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Daily Access/Security Logs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remarks</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


### IV. O&M COSTS

1. O&M Organization
   - [ ] State in-house
   - [ ] Contractor for State
   - [ ] PRP in-house
   - [x] Contractor for PRP
   - [ ] Federal Facility in-house
   - [ ] Contractor for Federal Facility
   - [ ] Other

2. O&M Cost Records
   - [ ] Readily available
   - [ ] Up to date
   - [ ] Funding mechanism/agreement in place
   - Original O&M cost estimate__________________________
   - [ ] Breakdown attached

   **Total annual cost by year for review period if available**

<table>
<thead>
<tr>
<th>From Date</th>
<th>To Date</th>
<th>Total cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td>Date</td>
<td>Total cost</td>
</tr>
<tr>
<td>Date</td>
<td>Date</td>
<td>Total cost</td>
</tr>
<tr>
<td>Date</td>
<td>Date</td>
<td>Total cost</td>
</tr>
<tr>
<td>Date</td>
<td>Date</td>
<td>Total cost</td>
</tr>
</tbody>
</table>

3. Unanticipated or Unusually High O&M Costs During Review Period
   - Describe costs and reasons: **none**

---

### V. ACCESS AND INSTITUTIONAL CONTROLS

- [ ] Applicable
- [x] N/A

#### A. Fencing

1. Fencing damaged
   - [ ] Location shown on site map
   - [ ] Gates secured
   - [ ] N/A
   - Remarks

#### B. Other Access Restrictions

1. Signs and other security measures
   - [ ] Location shown on site map
   - [ ] N/A
   - Remarks
### C. Institutional Controls (ICs)

1. **Implementation and enforcement**
   - Site conditions imply ICs not properly implemented
   - Site conditions imply ICs not being fully enforced

<table>
<thead>
<tr>
<th>Type of monitoring (e.g., self-reporting, drive by)</th>
<th>Frequency</th>
<th>Responsible party/agency</th>
<th>Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Date</th>
<th>Phone no.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

   - Reporting is up-to-date
   - Reports are verified by the lead agency
   - Specific requirements in deed or decision documents have been met
   - Violations have been reported
   - Other problems or suggestions: □ Report attached

2. **Adequacy**
   - □ ICs are adequate
   - □ ICs are inadequate
   - □ N/A

<table>
<thead>
<tr>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

### D. General

1. **Vandalism/trespassing**
   - □ Location shown on site map
   - □ No vandalism evident

<table>
<thead>
<tr>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

2. **Land use changes on site**
   - □ N/A

<table>
<thead>
<tr>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

3. **Land use changes off site**
   - □ N/A

<table>
<thead>
<tr>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

### VI. GENERAL SITE CONDITIONS

#### A. Roads
   - □ Applicable
   - □ N/A

1. **Roads damaged**
   - □ Location shown on site map
   - □ Roads adequate
   - □ N/A

<table>
<thead>
<tr>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>
### B. Other Site Conditions

**Remarks**

<table>
<thead>
<tr>
<th>Remarks</th>
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</tr>
</tbody>
</table>

### VII. LANDFILL COVERS □ Applicable ☑ N/A

#### A. Landfill Surface

1. **Settlement (Low spots)**
   - Areal extent:
   - Depth:
   - Remarks:

2. **Cracks**
   - Length:
   - Width:
   - Depth:
   - Remarks:

3. **Erosion**
   - Areal extent:
   - Depth:
   - Remarks:

4. **Holes**
   - Areal extent:
   - Depth:
   - Remarks:

5. **Vegetative Cover**
   - Grass:
   - Cover properly established:
   - No signs of stress:
   - Trees/Shrubs (indicate size and locations on a diagram):
   - Remarks:

6. **Alternative Cover (armored rock, concrete, etc.)** □ N/A
   - Remarks:

7. **Bulges**
   - Areal extent:
   - Height:
   - Remarks:
### 8. Wet Areas/Water Damage
- **Wet areas**
- **Ponding**
- **Seeps**
- **Soft subgrade**

<table>
<thead>
<tr>
<th>Description</th>
<th>Location on Site Map</th>
<th>Areal Extent</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wet areas</td>
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<td>Ponding</td>
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<td></td>
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<tr>
<td>Seeps</td>
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<td></td>
</tr>
<tr>
<td>Soft subgrade</td>
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</table>

### 9. Slope Instability
- **Slides**

<table>
<thead>
<tr>
<th>Description</th>
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<th>No Evidence of Slope Instability</th>
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</thead>
<tbody>
<tr>
<td>Slides</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### B. Benches
- Benches are horizontally constructed mounds of earth placed across a steep landfill side slope to interrupt the slope in order to slow down the velocity of surface runoff and intercept and convey the runoff to a lined channel.

<table>
<thead>
<tr>
<th>Description</th>
<th>Location on Site Map</th>
<th>N/A or Okay</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flows Bypass Bench</td>
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<tr>
<td>Remarks</td>
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</table>

### 2. Bench Breached

<table>
<thead>
<tr>
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<th>Remarks</th>
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<tbody>
<tr>
<td>Bench Breached</td>
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</tr>
<tr>
<td>Remarks</td>
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### 3. Bench Overtopped

<table>
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</thead>
<tbody>
<tr>
<td>Bench Overtopped</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Remarks</td>
<td></td>
<td></td>
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</tbody>
</table>

### C. Letdown Channels
- Letdown Channels are channels lined with erosion control mats, riprap, grout bags, or gabions that descend down the steep side slope of the cover and will allow the runoff water collected by the benches to move off of the landfill cover without creating erosion gullies.

<table>
<thead>
<tr>
<th>Description</th>
<th>Location on Site Map</th>
<th>No Evidence of Settlement</th>
<th>Remarks</th>
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</thead>
<tbody>
<tr>
<td>Settlement</td>
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<table>
<thead>
<tr>
<th>Description</th>
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<tbody>
<tr>
<td>Material Degradation</td>
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<table>
<thead>
<tr>
<th>Description</th>
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<td>Erosion</td>
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</tr>
<tr>
<td>Remarks</td>
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<td>---</td>
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</tr>
<tr>
<td>4. <strong>Undercutting</strong></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>□ Location shown on site map □ No evidence of undercutting</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Areal extent Depth Remarks</td>
<td></td>
<td></td>
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<tr>
<td>5. <strong>Obstructions</strong></td>
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<tr>
<td></td>
<td>□ No obstructions</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>□ Location shown on site map Areal extent</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Size Remarks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. <strong>Excessive Vegetative Growth</strong></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>□ No evidence of excessive growth</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ Vegetation in channels does not obstruct flow</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ Location shown on site map Areal extent</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Remarks</td>
<td></td>
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</tr>
<tr>
<td>D. <strong>Cover Penetrations</strong></td>
<td>□ Applicable □ N/A</td>
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<tr>
<td>1. <strong>Gas Vents</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ Active □ Passive</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>□ Properly secured/locked □ Functioning □ Routinely sampled □ Good condition</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ Evidence of leakage at penetration □ Needs Maintenance</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ N/A Remarks</td>
<td></td>
<td></td>
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<tr>
<td>2. <strong>Gas Monitoring Probes</strong></td>
<td></td>
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<td>□ Properly secured/locked □ Functioning □ Routinely sampled □ Good condition</td>
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<td></td>
<td>□ Evidence of leakage at penetration □ Needs Maintenance □ N/A</td>
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<tr>
<td></td>
<td>Remarks</td>
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<tr>
<td>3. <strong>Monitoring Wells (within surface area of landfill)</strong></td>
<td></td>
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<td></td>
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<tr>
<td></td>
<td>□ Properly secured/locked □ Functioning □ Routinely sampled □ Good condition</td>
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<td>□ Evidence of leakage at penetration □ Needs Maintenance □ N/A</td>
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<td>4. <strong>Leachate Extraction Wells</strong></td>
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<td>□ Properly secured/locked □ Functioning □ Routinely sampled □ Good condition</td>
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<td></td>
<td>□ Evidence of leakage at penetration □ Needs Maintenance □ N/A</td>
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<tr>
<td></td>
<td>Remarks</td>
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<tr>
<td>5. <strong>Settlement Monuments</strong></td>
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<td>□ Located □ Routinely surveyed □ N/A</td>
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### E. Gas Collection and Treatment

<table>
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<tr>
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<tbody>
<tr>
<td>1.</td>
<td>Gas Treatment Facilities</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ Flaring</td>
<td>□ Thermal destruction</td>
</tr>
<tr>
<td></td>
<td>□ Good condition</td>
<td>□ Needs Maintenance</td>
</tr>
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<td></td>
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<tbody>
<tr>
<td>2.</td>
<td>Gas Collection Wells, Manifolds and Piping</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ Good condition</td>
<td>□ Needs Maintenance</td>
</tr>
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<td></td>
<td>Remarks</td>
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<table>
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<tr>
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<th>□ Applicable</th>
<th>□ N/A</th>
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<tbody>
<tr>
<td>3.</td>
<td>Gas Monitoring Facilities (e.g., gas monitoring of adjacent homes or buildings)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ Good condition</td>
<td>□ Needs Maintenance</td>
</tr>
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### F. Cover Drainage Layer

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<td>Outlet Pipes Inspected</td>
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<tbody>
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<td>Outlet Rock Inspected</td>
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<tr>
<td></td>
<td>□ Functioning</td>
<td>□ N/A</td>
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<tr>
<td></td>
<td>Remarks</td>
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### G. Detention/Sedimentation Ponds

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<tr>
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<tr>
<td></td>
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<td>Depth</td>
</tr>
<tr>
<td></td>
<td>□ Siltation not evident</td>
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</tr>
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<td>Remarks</td>
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<td>2.</td>
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<td>Depth</td>
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<tr>
<td></td>
<td>□ Erosion not evident</td>
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<td>Remarks</td>
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<tr>
<td>3.</td>
<td>Outlet Works</td>
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<tr>
<td></td>
<td>□ Functioning</td>
<td>□ N/A</td>
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<tr>
<td>4.</td>
<td>Dam</td>
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</tr>
<tr>
<td></td>
<td>□ Functioning</td>
<td>□ N/A</td>
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<td>Remarks</td>
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</table>
### H. Retaining Walls

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<tr>
<th></th>
<th>□ Applicable</th>
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<tbody>
<tr>
<td>1. Deformations</td>
<td>□ Location shown on site map</td>
<td>□ Deformation not evident</td>
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<tr>
<td></td>
<td>Horizontal displacement</td>
<td>Vertical displacement</td>
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<td>Rotational displacement</td>
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<table>
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<th>□ Degradation not evident</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remarks</td>
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### I. Perimeter Ditches/Off-Site Discharge

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<tr>
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<td>Remarks</td>
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<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>2. Vegetative Growth</td>
<td>□ Vegetation does not impede flow</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Areal extent</td>
<td>Type</td>
</tr>
<tr>
<td>Remarks</td>
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<table>
<thead>
<tr>
<th></th>
<th>□ Location shown on site map</th>
<th>□ Erosion not evident</th>
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<td>3. Erosion</td>
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<table>
<thead>
<tr>
<th></th>
<th>□ Functioning</th>
<th>□ N/A</th>
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<tbody>
<tr>
<td>4. Discharge Structure</td>
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### VIII. VERTICAL BARRIER WALLS

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<tr>
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<td>1. Settlement</td>
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<td>Remarks</td>
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<table>
<thead>
<tr>
<th></th>
<th>□ Performance not monitored</th>
<th>□ Evidence of breaching</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Performance Monitoring</td>
<td>Type of monitoring</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Frequency</td>
<td>Head differential</td>
</tr>
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<td>Remarks</td>
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<table>
<thead>
<tr>
<th>IX. GROUNDWATER/SURFACE WATER REMEDIES</th>
<th>□ Applicable</th>
<th>N/A</th>
</tr>
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<tbody>
<tr>
<td>A. Groundwater Extraction Wells, Pumps, and Pipelines</td>
<td>□ Applicable</td>
<td>N/A</td>
</tr>
<tr>
<td>1. Pumps, Wellhead Plumbing, and Electrical</td>
<td>□ Good condition □ All required wells properly operating □ Needs Maintenance □ N/A Remarks</td>
<td></td>
</tr>
<tr>
<td>2. Extraction System Pipelines, Valves, Valve Boxes, and Other Appurtenances</td>
<td>□ Good condition □ Needs Maintenance Remarks</td>
<td></td>
</tr>
<tr>
<td>3. Spare Parts and Equipment</td>
<td>□ Readily available □ Good condition □ Requires upgrade □ Needs to be provided Remarks</td>
<td></td>
</tr>
<tr>
<td>B. Surface Water Collection Structures, Pumps, and Pipelines</td>
<td>□ Applicable</td>
<td>N/A</td>
</tr>
<tr>
<td>1. Collection Structures, Pumps, and Electrical</td>
<td>□ Good condition □ Needs Electrical Remarks</td>
<td></td>
</tr>
<tr>
<td>2. Surface Water Collection System Pipelines, Valves, Valve Boxes, and Other Appurtenances</td>
<td>□ Good condition □ Needs Maintenance Remarks</td>
<td></td>
</tr>
<tr>
<td>3. Spare Parts and Equipment</td>
<td>□ Readily available □ Good condition □ Requires upgrade □ Needs to be provided Remarks</td>
<td></td>
</tr>
</tbody>
</table>
### C. Treatment System

| □ Applicable | ✓ N/A |

1. **Treatment Train** (Check components that apply)
   - □ Metals removal
   - □ Oil/water separation
   - □ Air stripping
   - □ Carbon adsorbers
   - □ Bioremediation
   - □ Filters
   - □ Additive (e.g., chelation agent, flocculent)
   - □ Others
   - □ Good condition
   - □ Needs Maintenance
   - □ Sampling ports properly marked and functional
   - □ Sampling/maintenance log displayed and up to date
   - □ Equipment properly identified
   - □ Quantity of groundwater treated annually
   - □ Quantity of surface water treated annually
   - Remarks

2. **Electrical Enclosures and Panels** (properly rated and functional)
   - □ N/A
   - □ Good condition
   - □ Needs Maintenance
   - Remarks

3. **Tanks, Vaults, Storage Vessels**
   - □ N/A
   - □ Good condition
   - □ Proper secondary containment
   - □ Needs Maintenance
   - Remarks

4. **Discharge Structure and Appurtenances**
   - □ N/A
   - □ Good condition
   - □ Needs Maintenance
   - Remarks

5. **Treatment Building(s)**
   - □ N/A
   - □ Good condition (esp. roof and doorways)
   - □ Needs repair
   - □ Chemicals and equipment properly stored
   - Remarks

6. **Monitoring Wells** (pump and treatment remedy)
   - □ Properly secured/locked
   - □ Functioning
   - □ Routinely sampled
   - □ Good condition
   - □ All required wells located
   - □ Needs Maintenance
   - □ N/A
   - Remarks

### D. Monitoring Data

1. **Monitoring Data**
   - □ Is routinely submitted on time
   - □ Is of acceptable quality

2. **Monitoring data suggests:**
   - □ Groundwater plume is effectively contained
   - □ Contaminant concentrations are declining
## D. Monitored Natural Attenuation

<table>
<thead>
<tr>
<th>Monitoring Wells (natural attenuation remedy)</th>
<th>Annual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Properly secured/locked</td>
<td>☑</td>
</tr>
<tr>
<td>☑ Functioning</td>
<td></td>
</tr>
<tr>
<td>☑ Routinely sampled</td>
<td></td>
</tr>
<tr>
<td>☑ Good condition</td>
<td></td>
</tr>
<tr>
<td>☑ All required wells located</td>
<td></td>
</tr>
<tr>
<td>☐ Needs Maintenance</td>
<td></td>
</tr>
<tr>
<td>☐ N/A</td>
<td></td>
</tr>
<tr>
<td>Remarks</td>
<td></td>
</tr>
</tbody>
</table>

## X. OTHER REMEDIES

If there are remedies applied at the site which are not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction.

## XI. OVERALL OBSERVATIONS

### A. Implementation of the Remedy

Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is to accomplish (i.e., to contain contaminant plume, minimize infiltration and gas emission, etc.).

Remedy is N/A -- all wells are well maintained and appear to be in good condition.

### B. Adequacy of O&M

Describe issues and observations related to the implementation and scope of O&M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy.

Monitoring wells are locked and in good condition.
C. Early Indicators of Potential Remedy Problems

Describe issues and observations such as unexpected changes in the cost or scope of O&M or a high frequency of unscheduled repairs, that suggest that the protectiveness of the remedy may be compromised in the future.

<table>
<thead>
<tr>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

D. Opportunities for Optimization

E. Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy.

Other City of Porterville has annexed entire area from Com Teh County

Land at MNA - 4 sold, apta will be built, New housing development, to the south, Plume is how about 1 block (or smaller in size)
Attachment 4
Toxicity Review Summary Memorandum, Third Five-Year Review

MEMORANDUM FOR RECORD

SUBJECT: Toxicity Review Summary, Beckman Instruments Superfund Site, Five Year Review

PREPARED BY: Emile Pitre, Chemical Engineer, Seattle District, U.S. Army Corps of Engineers

DATE: 1 August 2008

Seattle District, U.S. Army Corps of Engineers is assisting the U.S. Environmental Protection Agency (EPA), Region 9, with the completion of statutorily required five-year reviews. As requested by EPA, one of the steps in evaluating the protectiveness of an implemented remedy is a review of the toxicity values for contaminants of concern (COCs). The goal of the toxicity review is to determine if changes in the toxicity values identified in the Record of Decision (ROD) impact the protectiveness of the remedy. This memorandum is the toxicity review for the Beckman Instruments Superfund Site Five-Year Review.

The toxicity values from the 1988 Endangerment Assessment (EA) were used in the 1989 ROD. At the time of the EA there was no toxicity data evaluated for two of the five COCs, 1,1-dichloroethane and Freon 113. Revisions to the toxicity values for 1,1-dichloroethylene (1,1-DCE) indicate a lower risk from exposure than previously considered. Since the EA, the oral reference dose increased from 0.009 mg/kg-day to the current 0.05 mg/kg-day signifying a lower risk from exposure. Furthermore, cancer slope factors were removed from the Integrated Risk Information System (IRIS) database because 1,1-DCE showed equivocal evidence of carcinogenicity by the oral route of exposure and the weight-of-evidence was not sufficient to justify deriving an inhalation unit risk. Lastly, 1,1-DCE was classified as a Group C carcinogen at the time of the EA, or possibly carcinogenic to humans. The alphanumerical classification system used in EPA’s 1986 “Guidelines for Carcinogen Risk Assessment” has since been replaced by descriptors and narratives. Under the 1999 draft revised guidelines for carcinogen risk assessment, EPA concludes 1,1-DCE exhibits suggestive evidence of carcinogenicity but not sufficient evidence to assess human carcinogenic potential.

The toxicity value for trichloroethene (TCE) that was originally used in the EA has been withdrawn by EPA and a new value has yet to be included in the IRIS database. EPA has recommended that toxicity values from California EPA be used until IRIS values are available. These changes do not affect the protectiveness of the groundwater remedy since the current concentrations of TCE are below the state and federal maximum contaminant levels (MCLs).
## Toxicity Data

<table>
<thead>
<tr>
<th>COC</th>
<th>Reference Dose (oral) (mg/kg-day)</th>
<th>Reference Dose (inhalation) (mg/kg-day)</th>
<th>Slope Factor (oral) (mg/kg-day)$^1$</th>
<th>Slope Factor (Inhalation) (mg/kg-day)$^1$</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trichloroethene</td>
<td>1988 EA</td>
<td>-</td>
<td>0.011</td>
<td>0.013</td>
<td>IRIS</td>
</tr>
<tr>
<td></td>
<td>Current Info</td>
<td>-</td>
<td>- / 0.013</td>
<td>- / 0.007</td>
<td>IRIS/CalEPA</td>
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<tr>
<td>1,1-Dichloroethane</td>
<td></td>
<td>No toxicity data evaluated at the time of the EA</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Current Info</td>
<td>-</td>
<td>- / 0.0057</td>
<td>- / 0.0057</td>
<td>IRIS/CalEPA</td>
</tr>
<tr>
<td>1,1-Dichloroethylene</td>
<td>1988 EA</td>
<td>0.009</td>
<td>0.6</td>
<td>1.2</td>
<td>IRIS</td>
</tr>
<tr>
<td></td>
<td>Current Info</td>
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<td>0.2 mg/m$^3$ RfC</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1,1,1-Trichloroethane</td>
<td>1988 EA</td>
<td>0.09</td>
<td></td>
<td></td>
<td>IRIS</td>
</tr>
<tr>
<td></td>
<td>Current Info</td>
<td>2</td>
<td>5 mg/m$^3$ RfC</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Freon 113</td>
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<td>No toxicity data evaluated at the time of the EA</td>
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<td></td>
<td></td>
</tr>
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<td></td>
<td>Current Info</td>
<td>30</td>
<td>30 mg/m$^3$ RfC</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

$^1$ EA = Endangerment Assessment; IRIS = Integrated Risk Information System; CalEPA = California EPA; HEAST = Health Evaluation Assessment Summary Tables
Figure 1 - Site Location Map

BECKMAN INSTRUMENTS SUPERFUND SITE
Porterville
EXPLANATION

- LOWER AQUIFER MONITOR WELL
- ABANDONED LOWER AQUIFER WELL